

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
APPLICATION NO. : 09/869414
DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 1 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In the Cover Sheet:

At Section 54, column 1, please delete "Disease, Secretase" and insert --Disease Secretase--.

At Section (*), column 1, please insert --This patent is subject to a terminal disclaimer--.

On page 2, column 1, line 5, please delete "th" and insert --the--.

In the Specification:

At Column 1, line 1, please delete "Disease, Secretase" and insert --Disease Secretase--.

At Column 2, line 3, please delete "a-site" and insert -- α site--.

At Column 3, line 56, please insert --of-- before "those".

At Column 4, line 24, please delete "lease" and insert --least--.

At Column 5, line 10, please insert --to-- before "any".

At Column 5, line 49, please insert --of-- before "those".

At Column 6, line 28, please delete "lease" and insert --least--.

At Column 8, line 6, please insert --iii) select the cells which produce the critical peptide-- after "APP,".

At Column 8, line 16, please insert --(SEQ ID NO: 74)-- after "P2".

At Column 8, line 37, please delete "has" and insert --as--.

At Column 8, line 64, please delete "Measurment" and insert --Measurement--.

At Column 9, line 3, please delete "reporter-protein" and insert --reporter protein--.

At Column 9, line 38, please delete "construct" and insert --constructed--.

At Column 9, line 40, please delete "strechess" and insert --stretches--.

At Column 9, line 51, please delete "recombinant" and insert --recombinant--.

At Column 10, line 12, please delete "hyrdrophobic" and insert --hydrophobic--.

At Column 11, line 37, please delete "oassays" and insert --bioassays--.

At Column 11, line 53, please delete "on" and insert --one--.

At Column 16, line 11, please delete "Fig. 11" and insert --Fig. 12--.

At Column 16, line 48, please delete "I)" and insert --ID--.

At Column 16, line 65, please delete "Glutarnine" and insert --Glutamine--.

At Column 17, line 37, please delete " α -secretase" and insert -- β -secretase--.

At Column 18, line 38, please delete "possible" and insert --possibly--.

At Column 21, line 12, please delete "6" and insert --6,--.

At Column 25, line 12, please delete "embyonic" and --embryonic--.

At column 30, line 28, please delete "Hu-ASPI" and insert --Hu-aspl--.

At column 31, line 20, please delete "sequence" and insert --sequenced--.

At column 32, line 42, please insert --to-- before "contain".

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It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In the Specification, (cont'd):

At column 33, line 8, please delete "manufacture" and insert --manufacturer--.

At column 33, line 60, please delete "Phosphol mager" and insert
--PhosphorImager--.

At column 33, line 63, please delete "is" and insert --in--.

At column 33, line 66, please delete "CDNA" and insert --cDNA--.

At column 35, line 59, please delete "AP" and insert --A β --.

At column 36, line 63, please delete "proprietary" and insert --proprietary--.

At column 39, line 17, please delete "AP" and insert --A β --.

At column 39, line 18, please delete "AP" and insert --A β --.

At column 39, line 24, please delete "AP" and insert --A β --.

At column 39, line 26, please delete "P42" and insert -- β 42--.

At column 39, line 26, please delete "y-secretase" and insert -- γ -secretase--.

At column 40, line 51, please delete "Ab" and insert --A β --.

At column 40, line 67, please delete " β P40" and insert --A β 40--.

At column 40, line 67, please delete " β P42" and insert --A β 42--.

At column 41, line 5, please delete " β P42" and insert --A β 42--.

At column 41, line 17, please delete "Ab." and insert --A β --.

At column 44, line 50, please delete "internediate" and insert --intermediate--.

At column 45, line 37, please delete "2O" and insert --20--.

At column 45, line 43, please delete "101 M" and insert --101 μ M--.

At column 45, line 65, please delete "Hu-ASp2(b)" and insert --Hu-Asp2(b)--.

At column 46, line 65, please delete "prepared" and insert --prepare--.

At column 48, line 1, please delete "(1/250)" and insert --(1/2500)--.

At column 48, line 11, please delete "KI" and insert --K1--.

At column 49, line 16, please delete "Swedigh" and insert --Swedish--.

In the Sequence Listing:

Please delete the sequence listing as published and replace with the paper copy attached hereto.

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It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In the Claims:

In claim 1, at column 163, lines 43-44, please delete "FIG. 3 (SEQ ID NO: 4)," and insert --FIG. 4, (SEQ ID NO: 3)--.

In claim 1, at column 163, lines 51-54, please delete ", and wherein the polypeptide exhibits aspartyl protease activity involved in processing APP into amyloid beta." and insert --.--.

In claim 6, at column 164, line 45, please delete "A host" and insert --An isolated host--.

In claim 8, at column 164, line 50, please delete "derived from" and insert -- that is--.

In claim 10, at column 164, line 56, please delete "A host" and insert --An isolated host--.

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It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

SEQUENCE LISTING

<110> Gurney et al.

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<213> Homo sapiens

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35 40 45

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50 55 60

Asp Asn Leu Arg Gly Lys Ser Gly Gln Gly Tyr Tyr Val Glu Met Thr
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Val Gly Ser Pro Pro Gln Thr Leu Asn Ile Leu Val Asp Thr Gly Ser
85 90 95

Ser Asn Phe Ala Val Gly Ala Ala Pro His Pro Phe Leu His Arg Tyr
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Tyr Gln Arg Gln Leu Ser Ser Thr Tyr Arg Asp Leu Arg Lys Gly Val
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Tyr Val Pro Tyr Thr Gln Gly Lys Trp Glu Gly Glu Leu Gly Thr Asp
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gcaggttacc ttggcgtgtg tccctgtggt accctggcag agaagagacc aagcttgttt 1860
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<212> PRT
<213> Homo sapiens

<400> 6

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Leu Pro Ala His Gly Thr Gln His Gly Ile Arg Leu Pro Leu Arg Ser

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
 APPLICATION NO. : 09/869414
 DATED : September 14, 2004
 INVENTOR(S) : Mark E. Gurney et al.

Page 11 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

20	25	30
Gly Leu Gly Gly Ala Pro Leu Gly Leu Arg Leu Pro Arg Glu Thr Asp 35 40 45		
Glu Glu Pro Glu Glu Pro Gly Arg Arg Gly Ser Phe Val Glu Met Val 50 55 60		
Asp Asn Leu Arg Gly Lys Ser Gly Gln Gly Tyr Tyr Val Glu Met Thr 65 70 75 80		
Val Gly Ser Pro Pro Gln Thr Leu Asn Ile Leu Val Asp Thr Gly Ser 85 90 95		
Ser Asn Phe Ala Val Gly Ala Ala Pro His Pro Phe Leu His Arg Tyr 100 105 110		
Tyr Gln Arg Gln Leu Ser Ser Thr Tyr Arg Asp Leu Arg Lys Gly Val 115 120 125		
Tyr Val Pro Tyr Thr Gln Gly Lys Trp Glu Gly Glu Leu Gly Thr Asp 130 135 140		
Leu Val Ser Ile Pro His Gly Pro Asn Val Thr Val Arg Ala Asn Ile 145 150 155 160		
Ala Ala Ile Thr Glu Ser Asp Lys Phe Phe Ile Asn Gly Ser Asn Trp 165 170 175		
Glu Gly Ile Leu Gly Leu Ala Tyr Ala Glu Ile Ala Arg Leu Cys Gly 180 185 190		
Ala Gly Phe Pro Leu Asn Gln Ser Glu Val Leu Ala Ser Val Gly Gly 195 200 205		
Ser Met Ile Ile Gly Gly Ile Asp His Ser Leu Tyr Thr Gly Ser Leu 210 215 220		
Trp Tyr Thr Pro Ile Arg Arg Glu Trp Tyr Tyr Glu Val Ile Ile Val 225 230 235 240		
Arg Val Glu Ile Asn Gly Gln Asp Leu Lys Met Asp Cys Lys Glu Tyr 245 250 255		
Asn Tyr Asp Lys Ser Ile Val Asp Ser Gly Thr Thr Asn Leu Arg Leu 260 265 270		
Pro Lys Lys Val Phe Glu Ala Ala Val Lys Ser Ile Lys Ala Ala Ser 275 280 285		
Ser Thr Glu Lys Phe Pro Asp Gly Phe Trp Leu Gly Glu Gln Leu Val 290 295 300		
Cys Trp Gln Ala Gly Thr Thr Pro Trp Asn Ile Phe Pro Val Ile Ser 305 310 315 320		
Leu Tyr Leu Met Gly Glu Val Thr Asn Gln Ser Phe Arg Ile Thr Ile 325 330 335		
Leu Pro Gln Gln Tyr Leu Arg Pro Val Glu Asp Val Ala Thr Ser Gln 340 345 350		

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
APPLICATION NO. : 09/869414
DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 12 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Asp Asp Cys Tyr Lys Phe Ala Ile Ser Gln Ser Ser Thr Gly Thr Val
355 360 365

Met Gly Ala Val Ile Met Glu Gly Phe Tyr Val Val Phe Asp Arg Ala
370 375 380

Arg Lys Arg Ile Gly Phe Ala Val Ser Ala Cys His Val His Asp Glu
385 390 395 400

Phe Arg Thr Ala Ala Val Glu Gly Pro Phe Val Thr Leu Asp Met Glu
405 410 415

Asp Cys Gly Tyr Asn Ile Pro Gln Thr Asp Glu Ser Thr Leu Met Thr
420 425 430

Ile Ala Tyr Val Met Ala Ala Ile Cys Ala Leu Phe Met Leu Pro Leu
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Cys Leu Met Val Cys Gln Trp Arg Cys Leu Arg Cys Leu Arg Gln Gln
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<211> 2043
<212> DNA
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gggctggcct atgctgagat tgccaggccc gacgaotott tggagccctt ctttgactcc 600
ctggtgaagc agaccacat tcccaacatc ttttccctgc agctctgtgg cgctggcttc 660
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gaccactcgc tatacacggg cagtctctgg tacacacca tccggcggga gtggtattat 780
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UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
APPLICATION NO. : 09/869414
DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 13 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

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tggegtcata ctcaggetac ccggcatgtg tccctgtggt accctggcag agaaagggcc 1920
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gaa 2043
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<210> 8
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<212> PRT
<213> Mus musculus

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 20          25          30
Gly Leu Ala Gly Pro Pro Leu Gly Leu Arg Leu Pro Arg Glu Thr Asp
 35          40          45
Glu Glu Ser Glu Glu Pro Gly Arg Arg Gly Ser Phe Val Glu Met Val
 50          55          60
Asp Asn Leu Arg Gly Lys Ser Gly Gln Gly Tyr Tyr Val Glu Met Thr
 65          70          75          80
Val Gly Ser Pro Pro Gln Thr Leu Asn Ile Leu Val Asp Thr Gly Ser
 85          90          95
Ser Asn Phe Ala Val Gly Ala Ala Pro His Pro Phe Leu His Arg Tyr
100          105          110
Tyr Gln Arg Gln Leu Ser Ser Thr Tyr Arg Asp Leu Arg Lys Gly Val
115          120          125
Tyr Val Pro Tyr Thr Gln Gly Lys Trp Glu Gly Glu Leu Gly Thr Asp
130          135          140
Leu Val Ser Ile Pro His Gly Pro Asn Val Thr Val Arg Ala Asn Ile
145          150          155          160
Ala Ala Ile Thr Glu Ser Asp Lys Phe Phe Ile Asn Gly Ser Asn Trp
165          170          175
Glu Gly Ile Leu Gly Leu Ala Tyr Ala Glu Ile Ala Arg Pro Asp Asp
180          185          190
Ser Leu Glu Pro Phe Phe Asp Ser Leu Val Lys Gln Thr His Ile Pro
195          200          205
Asn Ile Phe Ser Leu Gln Leu Cys Gly Ala Gly Phe Pro Leu Asn Gln
210          215          220
Thr Glu Ala Leu Ala Ser Val Gly Gly Ser Met Ile Ile Gly Gly Ile
225          230          235          240
Asp His Ser Leu Tyr Thr Gly Ser Leu Trp Tyr Thr Pro Ile Arg Arg
245          250          255
Glu Trp Tyr Tyr Glu Val Ile Ile Val Arg Val Glu Ile Asn Gly Gln
260          265          270
Asp Leu Lys Met Asp Cys Lys Glu Tyr Asn Tyr Asp Lys Ser Ile Val
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PATENT NO. : 6,790,610 B2
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 DATED : September 14, 2004
 INVENTOR(S) : Mark E. Gurney et al.

Page 14 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

275	280	285
Asp Ser Gly Thr Thr Asn Leu Arg Leu Pro Lys Lys Val Phe Glu Ala		
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Ala Val Lys Ser Ile Lys Ala Ala Ser Ser Thr Glu Lys Phe Pro Asp		
305	310	315
Gly Phe Trp Leu Gly Glu Gln Leu Val Cys Trp Gln Ala Gly Thr Thr		
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Pro Trp Asn Ile Phe Pro Val Ile Ser Leu Tyr Leu Met Gly Glu Val		
340	345	350
Thr Asn Gln Ser Phe Arg Ile Thr Ile Leu Pro Gln Gln Tyr Leu Arg		
355	360	365
Pro Val Glu Asp Val Ala Thr Ser Gln Asp Asp Cys Tyr Lys Phe Ala		
370	375	380
Val Ser Gln Ser Ser Thr Gly Thr Val Met Gly Ala Val Ile Met Glu		
385	390	395
Gly Phe Tyr Val Val Phe Asp Arg Ala Arg Lys Arg Ile Gly Phe Ala		
405	410	415
Val Ser Ala Cys His Val His Asp Glu Phe Arg Thr Ala Ala Val Glu		
420	425	430
Gly Pro Phe Val Thr Ala Asp Met Glu Asp Cys Gly Tyr Asn Ile Pro		
435	440	445
Gln Thr Asp Glu Ser Thr Leu Met Thr Ile Ala Tyr Val Met Ala Ala		
450	455	460
Ile Cys Ala Leu Phe Met Leu Pro Leu Cys Leu Met Val Cys Gln Trp		
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<210> 9
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 <212> DNA
 <213> Homo sapiens

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UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
 APPLICATION NO. : 09/869414
 DATED : September 14, 2004
 INVENTOR(S) : Mark E. Gurney et al.

Page 15 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

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gtggaggttg acgccgctgt caccacagag gagcgccacc tgtccaagat gcagcagaaac 2040
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 <212> PRT
 <213> Homo sapiens

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 20         25         30

Gln Ile Ala Met Phe Cys Gly Arg Leu Asn Met His Met Asn Val Gln
 35         40         45

Asn Gly Lys Trp Asp Ser Asp Pro Ser Gly Thr Lys Thr Cys Ile Asp
 50         55         60

Thr Lys Glu Gly Ile Leu Gln Tyr Cys Gln Glu Val Tyr Pro Glu Leu
 65         70         75         80

Gln Ile Thr Asn Val Val Glu Ala Asn Gln Pro Val Thr Ile Gln Asn
 85         90         95

Trp Cys Lys Arg Gly Arg Lys Gln Cys Lys Thr His Pro His Phe Val
100        105        110

Ile Pro Tyr Arg Cys Leu Val Gly Glu Phe Val Ser Asp Ala Leu Leu
115        120        125

Val Pro Asp Lys Cys Lys Phe Leu His Gln Glu Arg Met Asp Val Cys
130        135        140

Glu Thr His Leu His Trp His Thr Val Ala Lys Glu Thr Cys Ser Glu
145        150        155        160

Lys Ser Thr Asn Leu His Asp Tyr Gly Met Leu Leu Pro Cys Gly Ile
165        170        175
  
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UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
APPLICATION NO. : 09/869414
DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 16 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Asp Lys Phe Arg Gly Val Glu Phe Val Cys Cys Pro Leu Ala Glu Glu
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Ser Asp Asn Val Asp Ser Ala Asp Ala Glu Glu Asp Asp Ser Asp Val
195 200 205

Trp Trp Gly Gly Ala Asp Thr Asp Tyr Ala Asp Gly Ser Glu Asp Lys
210 215 220

Val Val Glu Val Ala Glu Glu Glu Glu Val Ala Glu Val Glu Glu Glu
225 230 235 240

Glu Ala Asp Asp Asp Glu Asp Asp Glu Asp Gly Asp Glu Val Glu Glu
245 250 255

Glu Ala Glu Glu Pro Tyr Glu Glu Ala Thr Glu Arg Thr Thr Ser Ile
260 265 270

Ala. Thr Thr Thr Thr Thr Thr Thr Glu Ser Val Glu Glu Val Val Arg
275 280 285

Val Pro Thr Thr Ala Ala Ser Thr Pro Asp Ala Val Asp Lys Tyr Leu
290 295 300

Glu Thr Pro Gly Asp Glu Asn Glu His Ala His Phe Gln Lys Ala Lys
305 310 315 320

Glu Arg Leu Glu Ala Lys His Arg Glu Arg Met Ser Gln Val Met Arg
325 330 335

Glu Trp Glu Glu Ala Glu Arg Gln Ala Lys Asn Leu Pro Lys Ala Asp
340 345 350

Lys Lys Ala Val Ile Gln His Phe Gln Glu Lys Val Glu Ser Leu Glu
355 360 365

Gln Glu Ala Ala Asn Glu Arg Gln Gln Leu Val Glu Thr His Met Ala
370 375 380

Arg Val Glu Ala Met Leu Asn Asp Arg Arg Arg Leu Ala Leu Glu Asn
385 390 395 400

Tyr Ile Thr Ala Leu Gln Ala Val Pro Pro Arg Pro Arg His Val Phe
405 410 415

Asn Met Leu Lys Lys Tyr Val Arg Ala Glu Gln Lys Asp Arg Gln His
420 425 430

Thr Leu Lys His Phe Glu His Val Arg Met Val Asp Pro Lys Lys Ala
435 440 445

Ala Gln Ile Arg Ser Gln Val Met Thr His Leu Arg Val Ile Tyr Glu
450 455 460

Arg Met Asn Gln Ser Leu Ser Leu Leu Tyr Asn Val Pro Ala Val Ala
465 470 475 480

Glu Glu Ile Gln Asp Glu Val Asp Glu Leu Leu Gln Lys Glu Gln Asn
485 490 495

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
APPLICATION NO. : 09/869414
DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 17 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Tyr Ser Asp Asp Val Leu Ala Asn Met Ile Ser Glu Pro Arg Ile Ser
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Tyr Gly Asn Asp Ala Leu Met Pro Ser Leu Thr Glu Thr Lys Thr Thr
515 520 525

Val Glu Leu Leu Pro Val Asn Gly Glu Phe Ser Leu Asp Asp Leu Gln
530 535 540

Pro Trp His Ser Phe Gly Ala Asp Ser Val Pro Ala Asn Thr Glu Asn
545 550 555 560

Glu Val Glu Pro Val Asp Ala Arg Pro Ala Ala Asp Arg Gly Leu Thr
565 570 575

Thr Arg Pro Gly Ser Gly Leu Thr Asn Ile Lys Thr Glu Glu Ile Ser
580 585 590

Glu Val Lys Met Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val
595 600 605

His His Gln Lys Leu Val Phe Phe Ala Glu Asp Val Gly Ser Asn Lys
510 615 620

Gly Ala Ile Ile Gly Leu Met Val Gly Gly Val Val Ile Ala Thr Val
625 630 635 640

Ile Val Ile Thr Leu Val Met Leu Lys Lys Lys Gln Tyr Thr Ser Ile
645 650 655

His His Gly Val Val Glu Val Asp Ala Ala Val Thr Pro Glu Glu Arg
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His Leu Ser Lys Met Gln Gln Asn Gly Tyr Glu Asn Pro Thr Tyr Lys
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690 695

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<212> DNA
<213> Homo sapiens
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c t g a a c a t g c	a c a t g a a t g t	c o g a a t g g g	a a g t g g g a t t	c a g a t c a c t c	a g g y a c c a a a	180
a c c t g c a t t c	a t a c c a a g a g a	a g g c a t c c t g	c a g t a t t g c c	a a g a a g t c t a	c c c t g a a c t g	240
c a g a t a c c a c a	a t g t g g t a g a	a g c c a a c o a a	c o a g t g a c c a	t o c a g a a a t g	g t g c a a g c g g	300
g g c c g a a g c	a g t g c a a g a c	c c a t c o c c a c	t t t g t g a t t c	c a t c a c c g t g	o t a g t t g g t	360
g a g t t t g t a a	g t g a t g c c c t	t c t o g t t c c t	g a c a a g t g c a	a a t c t t a c a	c a a g g a g a g t	420
a t g g a t g t t t	g c g a a a c t c a	t c t t c a c t g g	c a c a c c g t c g	c c a a a g a g a c	a t g c a g t g g t	480
a a g a g t a c c a	a c t t g c a t g a	c t a c c g c a t g	t t g t g t c c c t	g c g g a a t t g a	c a a g t t c g a	540
g g g g t a g a g t	t t g t g t g t g	c c a c t g g g c t	g a a g a a a g t g	a c a a t g t g g a	t t c t g t g a t	600
g c g g a g g a g g	a t g a c t c g g a	t g t c t g g t g t	g g g g g a c a g	a c a c a g a t a	t g a a g t g g t	660
a g t g a a g a c a	a a g t a g t a g a	a g t a g a c a g	g a g g a a g a a g	t g c g t g a g t	g g a a g a a g a	720
g a a g c c g a t g	a t g a c g a g g a	c y a t g a g g a t	g g t g a t g a g g	t a g a g g a a g a	g g c t g a g g a a	780
o c o t a a g a a g	a a g c c a c a g a	g a g a a c c a c c	a g c a t g c c a	c c a c c a c a c c	c a c c a c c a c a	840
c a g t c t g t g t	a a a g a g t g g t	t c a g a t t c c t	a c a a c a g c a c	c c a g t a c c c c	t g a t g c c g t	900

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
APPLICATION NO. : 09/869414
DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 18 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

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Gln Ile Thr Asn Val Val Glu Ala Asn Gln Pro Val Thr Ile Gln Asn
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Trp Cys Lys Arg Gly Arg Lys Gln Cys Lys Thr His Pro His Phe Val
100 105 110
Ile Pro Tyr Arg Cys Leu Val Gly Glu Phe Val Ser Asp Ala Leu Leu
115 120 125
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Glu Thr His Leu His Trp His Thr Val Ala Lys Glu Thr Cys Ser Glu
145 150 155 160
Lys Ser Thr Asn Leu His Asp Tyr Gly Met Leu Leu Pro Cys Gly Ile
165 170 175
Asp Lys Phe Arg Gly Val Glu Phe Val Cys Cys Pro Leu Ala Glu Glu
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UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
 APPLICATION NO. : 09/869414
 DATED : September 14, 2004
 INVENTOR(S) : Mark E. Gurney et al.

Page 19 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Ser Asp Asn Val Asp Ser Ala Asp Ala Glu Glu Asp Asp Ser Asp Val
 195 200 205

Trp Trp Gly Gly Ala Asp Thr Asp Tyr Ala Asp Gly Ser Glu Asp Lys
 210 215 220

Val Val Glu Val Ala Glu Glu Glu Val Ala Glu Val Glu Glu Glu
 225 230 235 240

Glu Ala Asp Asp Asp Glu Asp Asp Glu Asp Gly Asp Glu Val Glu Glu
 245 250 255

Glu Ala Glu Glu Pro Tyr Glu Glu Ala Thr Glu Arg Thr Thr Ser Ile
 260 265 270

Ala Thr Thr Thr Thr Thr Thr Thr Glu Ser Val Glu Glu Val Val Arg
 275 280 285

Val Pro Thr Thr Ala Ala Ser Thr Pro Asp Ala Val Asp Lys Tyr Leu
 290 295 300

Glu Thr Pro Gly Asp Glu Asn Glu His Ala His Phe Gln Lys Ala Lys
 305 310 315 320

Glu Arg Leu Glu Ala Lys His Arg Glu Arg Met Ser Gln Val Met Arg
 325 330 335

Glu Trp Glu Glu Ala Glu Arg Gln Ala Lys Asn Leu Pro Lys Ala Asp
 340 345 350

Lys Lys Ala Val Ile Gln His Phe Gln Glu Lys Val Glu Ser Leu Glu
 355 360 365

Gln Glu Ala Ala Asn Glu Arg Gln Gln Leu Val Glu Thr His Met Ala
 370 375 380

Arg Val Glu Ala Met Leu Asn Asp Arg Arg Arg Leu Ala Leu Glu Asn
 385 390 395 400

Tyr Ile Thr Ala Leu Gln Ala Val Pro Pro Arg Pro Arg His Val Phe
 405 410 415

Asn Met Leu Lys Lys Tyr Val Arg Ala Glu Gln Lys Asp Arg Gln His
 420 425 430

Thr Leu Lys His Phe Glu His Val Arg Met Val Asp Pro Lys Lys Ala
 435 440 445

Ala Gln Ile Arg Ser Gln Val Met Thr His Leu Arg Val Ile Tyr Glu
 450 455 460

Arg Met Asn Gln Ser Leu Ser Leu Leu Tyr Asn Val Pro Ala Val Ala
 465 470 475 480

Glu Glu Ile Gln Asp Glu Val Asp Glu Leu Leu Gln Lys Glu Gln Asn
 485 490 495

Tyr Ser Asp Asp Val Leu Ala Asn Met Ile Ser Glu Pro Arg Ile Ser
 500 505 510

Tyr Gly Asn Asp Ala Leu Met Pro Ser Leu Thr Glu Thr Lys Thr Thr

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
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DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 20 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

515	520	525
Val Glu Leu Leu Pro Val Asn Gly Glu Phe Ser Leu Asp Asp Leu Gln 530 535 540		
Pro Trp His Ser Phe Gly Ala Asp Ser Val Pro Ala Asn Thr Glu Asn 545 550 555 560		
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Thr Arg Pro Gly Ser Gly Leu Thr Asn Ile Lys Thr Glu Glu Ile Ser 580 585 590		
Glu Val Asn Leu Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val 595 600 605		
His His Gln Lys Leu Val Phe Phe Ala Glu Asp Val Gly Ser Asn Lys 610 615 620		
Gly Ala Ile Ile Gly Leu Met Val Gly Gly Val Val Ile Ala Thr Val 625 630 635 640		
Ile Val Ile Thr Leu Val Met Leu Lys Lys Lys Gln Tyr Thr Ser Ile 645 650 655		
His His Gly Val Val Glu Val Asp Ala Ala Val Thr Pro Glu Glu Arg 660 665 670		
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<212> DNA
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acacacatgg ccagagtgga agccatgctc aatgacccgc gccgcctggc cctggagaac 1200
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UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
 APPLICATION NO. : 09/869414
 DATED : September 14, 2004
 INVENTOR(S) : Mark E. Gurney et al.

Page 21 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

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 35 40 45
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 50 55 60
 Thr Lys Glu Gly Ile Leu Gln Tyr Cys Gln Glu Val Tyr Pro Glu Leu
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 115 120 125
 Val Pro Asp Lys Cys Lys Phe Leu His Gln Glu Arg Met Asp Val Cys
 130 135 140
 Glu Thr His Leu His Trp His Thr Val Ala Lys Glu Thr Cys Ser Glu
 145 150 155 160
 Lys Ser Thr Asn Leu His Asp Tyr Gly Met Leu Leu Pro Cys Gly Ile
 165 170 175
 Asp Lys Phe Arg Gly Val Glu Phe Val Cys Cys Pro Leu Ala Glu Glu
 180 185 190
 Ser Asp Asn Val Asp Ser Ala Asp Ala Glu Glu Asp Asp Ser Asp Val
 195 200 205
 Trp Trp Gly Gly Ala Asp Thr Asp Tyr Ala Asp Gly Ser Glu Asp Lys
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UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
APPLICATION NO. : 09/869414
DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 22 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Val Val Glu Val Ala Glu Glu Glu Glu Val Ala Glu Val Glu Glu Glu
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Glu Ala Asp Asp Asp Glu Asp Asp Glu Asp Gly Asp Glu Val Glu Glu
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Glu Ala Glu Glu Pro Tyr Glu Glu Ala Thr Glu Arg Thr Thr Ser Ile
260 265 270

Ala Thr Thr Thr Thr Thr Thr Thr Glu Ser Val Glu Glu Val Val Arg
275 280 285

Val Pro Thr Thr Ala Ala Ser Thr Pro Asp Ala Val Asp Lys Tyr Leu
290 295 300

Glu Thr Pro Gly Asp Glu Asn Glu His Ala His Phe Gln Lys Ala Lys
305 310 315 320

Glu Arg Leu Glu Ala Lys His Arg Glu Arg Met Ser Gln Val Met Arg
325 330 335

Glu Trp Glu Glu Ala Glu Arg Gln Ala Lys Asn Leu Pro Lys Ala Asp
340 345 350

Lys Lys Ala Val Ile Gln His Phe Gln Glu Lys Val Glu Ser Leu Glu
355 360 365

Gln Glu Ala Ala Asn Glu Arg Gln Gln Leu Val Glu Thr His Met Ala
370 375 380

Arg Val Glu Ala Met Leu Asn Asp Arg Arg Arg Leu Ala Leu Glu Asn
385 390 395 400

Tyr Ile Thr Ala Leu Gln Ala Val Pro Pro Arg Pro Arg His Val Phe
405 410 415

Asn Met Leu Lys Lys Tyr Val Arg Ala Glu Gln Lys Asp Arg Gln His
420 425 430

Thr Leu Lys His Phe Glu His Val Arg Met Val Asp Pro Lys Lys Ala
435 440 445

Ala Gln Ile Arg Ser Gln Val Met Thr His Leu Arg Val Ile Tyr Glu
450 455 460

Arg Met Asn Gln Ser Leu Ser Leu Leu Tyr Asn Val Pro Ala Val Ala
465 470 475 480

Glu Glu Ile Gln Asp Glu Val Asp Glu Leu Leu Gln Lys Glu Gln Asn
485 490 495

Tyr Ser Asp Asp Val Leu Ala Asn Met Ile Ser Glu Pro Arg Ile Ser
500 505 510

Tyr Gly Asn Asp Ala Leu Met Pro Ser Leu Thr Glu Thr Lys Thr Thr
515 520 525

Val Glu Leu Leu Pro Val Asn Gly Glu Phe Ser Leu Asp Asp Leu Gln
530 535 540

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
APPLICATION NO. : 09/869414
DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 23 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Pro Trp His Ser Phe Gly Ala Asp Ser Val Pro Ala Asn Thr Glu Asn
545 550 555 560

Glu Val Glu Pro Val Asp Ala Arg Pro Ala Ala Asp Arg Gly Leu Thr
565 570 575

Thr Arg Pro Gly Ser Gly Leu Thr Asn Ile Lys Thr Glu Glu Ile Ser
580 585 590

Glu Val Lys Met Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val
595 600 605

His His Gln Lys Leu Val Phe Phe Ala Glu Asp Val Gly Ser Asn Lys
610 615 620

Gly Ala Ile Ile Gly Leu Met Val Gly Gly Val Val Ile Ala Thr Val
625 630 635 640

Ile Phe Ile Thr Leu Val Met Leu Lys Lys Lys Gln Tyr Thr Ser Ile
645 650 655

His His Gly Val Val Glu Val Asp Ala Ala Val Thr Pro Glu Glu Arg
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Phe Phe Glu Gln Met Gln Asn
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PATENT NO. : 6,790,610 B2
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 INVENTOR(S) : Mark E. Gurney et al.

Page 24 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

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gtggaggttg acgcegtgt caccgcagag gagcgccacc tgtccaagat gcagcagaac 2040
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Gln Ile Ala Met Phe Cys Gly Arg Leu Asn Met His Met Asn Val Gln
  35          40          45

Asn Gly Lys Trp Asp Ser Asp Pro Ser Gly Thr Lys Thr Cys Ile Asp
  50          55          60

Thr Lys Glu Gly Ile Leu Gln Tyr Cys Gln Glu Val Tyr Pro Glu Leu
  65          70          75          80

Gln Ile Thr Asn Val Val Glu Ala Asn Gln Pro Val Thr Ile Gln Asn
  85          90          95

Trp Cys Lys Arg Gly Arg Lys Gln Cys Lys Thr His Pro His Phe Val
 100          105          110

Ile Pro Tyr Arg Cys Leu Val Gly Glu Phe Val Ser Asp Ala Leu Leu
 115          120          125

Val Pro Asp Lys Cys Lys Phe Leu His Gln Glu Arg Met Asp Val Cys
 130          135          140

Glu Thr His Leu His Trp His Thr Val Ala Lys Glu Thr Cys Ser Glu
 145          150          155          160

Lys Ser Thr Asn Leu His Asp Tyr Gly Met Leu Leu Pro Cys Gly Ile
 165          170          175

Asp. Lys Phe Arg Gly Val Glu Phe Val Cys Cys Pro Leu Ala Glu Glu
 180          185          190

Ser Asp Asn Val Asp Ser Ala Asp Ala Glu Glu Asp Asp Ser Asp Val
 195          200          205

Trp Trp Gly Gly Ala Asp Thr Asp Tyr Ala Asp Gly Ser Glu Asp Lys
 210          215          220

Val Val Glu Val Ala Glu Glu Glu Glu Val Ala Glu Val Glu Glu Glu
 225          230          235          240
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UNITED STATES PATENT AND TRADEMARK OFFICE
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PATENT NO. : 6,790,610 B2
APPLICATION NO. : 09/869414
DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 25 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Glu Ala Asp Asp Asp Glu Asp Asp Glu Asp Gly Asp Glu Val Glu Glu
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Glu Ala Glu Glu Pro Tyr Glu Glu Ala Thr Glu Arg Thr Thr Ser Ile
260 265 270

Ala Thr Thr Thr Thr Thr Thr Thr Glu Ser Val Glu Glu Val Val Arg
275 280 285

Val Pro Thr Thr Ala Ala Ser Thr Pro Asp Ala Val Asp Lys Tyr Leu
290 295 300

Glu Thr Pro Gly Asp Glu Asn Glu His Ala His Phe Gln Lys Ala Lys
305 310 315 320

Glu Arg Leu Glu Ala Lys His Arg Glu Arg Met Ser Gln Val Met Arg
325 330 335

Glu Trp Glu Glu Ala Glu Arg Gln Ala Lys Asn Leu Pro Lys Ala Asp
340 345 350

Lys Lys Ala Val Ile Gln His Phe Gln Glu Lys Val Glu Ser Leu Glu
355 360 365

Gln Glu Ala Ala Asn Glu Arg Gln Gln Leu Val Glu Thr His Met Ala
370 375 380

Arg Val Glu Ala Met Leu Asn Asp Arg Arg Arg Leu Ala Leu Glu Asn
385 390 395 400

Tyr Ile Thr Ala Leu Gln Ala Val Pro Pro Arg Pro Arg His Val Phe
405 410 415

Asn Met Leu Lys Lys Tyr Val Arg Ala Glu Gln Lys Asp Arg Gln His
420 425 430

Thr Leu Lys His Phe Glu His Val Arg Met Val Asp Pro Lys Lys Ala
435 440 445

Ala Gln Ile Arg Ser Gln Val Met Thr His Leu Arg Val Ile Tyr Glu
450 455 460

Arg Met Asn Gln Ser Leu Ser Leu Leu Tyr Asn Val Pro Ala Val Ala
465 470 475 480

Glu Glu Ile Gln Asp Glu Val Asp Glu Leu Leu Gln Lys Glu Gln Asn
485 490 495

Tyr Ser Asp Asp Val Leu Ala Asn Met Ile Ser Glu Pro Arg Ile Ser
500 505 510

Tyr Gly Asn Asp Ala Leu Met Pro Ser Leu Thr Glu Thr Lys Thr Thr
515 520 525

Val Glu Leu Leu Pro Val Asn Gly Glu Phe Ser Leu Asp Asp Leu Gln
530 535 540

Pro Trp His Ser Phe Gly Ala Asp Ser Val Pro Ala Asn Thr Glu Asn
545 550 555 560

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
APPLICATION NO. : 09/869414
DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 26 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Glu Val Glu Pro Val Asp Ala Arg Pro Ala Ala Asp Arg Gly Leu Thr
565 570 575

Thr Arg Pro Gly Ser Gly Leu Thr Asn Ile Lys Thr Glu Glu Ile Ser
580 585 590

Glu Val Lys Met Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val
595 600 605

His His Gln Lys Leu Val Phe Phe Ala Glu Asp Val Gly Ser Asn Lys
610 615 620

Gly Ala Ile Ile Gly Leu Met Val Gly Gly Val Val Ile Ala Thr Val
625 630 635 640

Ile Val Ile Thr Leu Val Met Leu Lys Lys Lys Gln Tyr Thr Ser Ile
645 650 655

His His Gly Val Val Glu Val Asp Ala Ala Val Thr Pro Glu Glu Arg
660 665 670

His Leu Ser Lys Met Gln Gln Asn Gly Tyr Glu Asn Pro Thr Tyr Lys
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Phe Phe Glu Gln Met Gln Asn Lys Lys
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aagtatgtcc gcgcagaaca gaaggacaga cagcaccccc taaagcattt cgagcatgtg 1320
cgcatggtgg atcccaagaa agccgctcag atccggctcc aggttatgac acacctccgt 1380
gtgatttatg agcgcagtaa tcagtctctc tccctgctct acaacgtgcc tgcagtggcc 1440
gaggagattc aggatgaagt tgatgagctg cttcagaaag agcaaaacta ttcagatgac 1500
gtcttggcca acatgattag tgaaccaagg atcagttacg gaaacgatgc totcatgcca 1560
tctttgaocg aaacgaaaac caccgtggag ctccttcccc tgaatggaga gttcagcctg 1620

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
APPLICATION NO. : 09/869414
DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 27 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

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gacgatctcc agccgtggca ttcttttggg gctgactctg tgccagccaa cacagaaaac 1680
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tctgggttga caaatatcaa gacggaggag atctctgaag tgaatctgga tgcagaattc 1800
cgacatgact caggatatga agttcatcat caaaaattgg tgttctttgc agaagatgtg 1860
ggttcaaaaca aaggtgcaat cattggactc atggtgggag gtgttgatcat agcagacagt 1920
atcgatcata ccttggtgat gctgaagaag aaacagtaca catccattca tcatgggtgtg 1980
gtggaggttg acgcgctgt caccagag gagcgccacc tgtccaagat gcagcagaac 2040
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<210> 18
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<212> PRT
<213> Homo sapiens

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  20          25          30
Gln Ile Ala Met Phe Cys Gly Arg Leu Asn Met His Met Asn Val Gln
  35          40          45
Asn Gly Lys Trp Asp Ser Asp Pro Ser Gly Thr Lys Thr Cys Ile Asp
  50          55          60
Thr Lys Glu Gly Ile Leu Gln Tyr Cys Gln Glu Val Tyr Pro Glu Leu
  65          70          75          80
Gln Ile Thr Asn Val Val Glu Ala Asn Gln Pro Val Thr Ile Gln Asn
  85          90          95
Trp Cys Lys Arg Gly Arg Lys Gln Cys Lys Thr His Pro His Phe Val
 100          105         110
Ile Pro Tyr Arg Cys Leu Val Gly Glu Phe Val Ser Asp Ala Leu Leu
 115          120         125
Val Pro Asp Lys Cys Lys Phe Leu His Gln Glu Arg Met Asp Val Cys
 130          135         140
Glu Thr His Leu His Trp His Thr Val Ala Lys Glu Thr Cys Ser Glu
 145          150         155         160
Lys Ser Thr Asn Leu His Asp Tyr Gly Met Leu Leu Pro Cys Gly Ile
 165          170         175
Asp Lys Phe Arg Gly Val Glu Phe Val Cys Cys Pro Leu Ala Glu Glu
 180          185         190
Ser Asp Asn Val Asp Ser Ala Asp Ala Glu Glu Asp Asp Ser Asp Val
 195          200         205
Trp Trp Gly Gly Ala Asp Thr Asp Tyr Ala Asp Gly Ser Glu Asp Lys
 210          215         220
Val Val Glu Val Ala Glu Glu Glu Glu Val Ala Glu Val Glu Glu Glu
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Glu Ala Asp Asp Asp Glu Asp Asp Glu Asp Gly Asp Glu Val Glu Glu
 245          250         255
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UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
APPLICATION NO. : 09/869414
DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 28 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Glu Ala Glu Glu Pro Tyr Glu Glu Ala Thr Glu Arg Thr Thr Ser Ile
260 265 270

Ala Thr Thr Thr Thr Thr Thr Thr Glu Ser Val Glu Glu Val Val Arg
275 280 285

Val Pro Thr Thr Ala Ala Ser Thr Pro Asp Ala Val Asp Lys Tyr Leu
290 295 300

Glu Thr Pro Gly Asp Glu Asn Glu His Ala His Phe Gln Lys Ala Lys
305 310 315 320

Glu Arg Leu Glu Ala Lys His Arg Glu Arg Met Ser Gln Val Met Arg
325 330 335

Glu Trp Glu Glu Ala Glu Arg Gln Ala Lys Asn Leu Pro Lys Ala Asp
340 345 350

Lys Lys Ala Val Ile Gln His Phe Gln Glu Lys Val Glu Ser Leu Glu
355 360 365

Gln Glu Ala Ala Asn Glu Arg Gln Gln Leu Val Glu Thr His Met Ala
370 375 380

Arg Val Glu Ala Met Leu Asn Asp Arg Arg Arg Leu Ala Leu Glu Asn
385 390 395 400

Tyr Ile Thr Ala Leu Gln Ala Val Pro Pro Arg Pro Arg His Val Phe
405 410 415

Asn Met Leu Lys Lys Tyr Val Arg Ala Glu Gln Lys Asp Arg Gln His
420 425 430

Thr Leu Lys His Phe Glu His Val Arg Met Val Asp Pro Lys Lys Ala
435 440 445

Ala Gln Ile Arg Ser Gln Val Met Thr His Leu Arg Val Ile Tyr Glu
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Arg Met Asn Gln Ser Leu Ser Leu Leu Tyr Asn Val Pro Ala Val Ala
465 470 475 480

Glu Glu Ile Gln Asp Glu Val Asp Glu Leu Leu Gln Lys Glu Gln Asn
485 490 495

Tyr Ser Asp Asp Val Leu Ala Asn Met Ile Ser Glu Pro Arg Ile Ser
500 505 510

Tyr Gly Asn Asp Ala Leu Met Pro Ser Leu Thr Glu Thr Lys Thr Thr
515 520 525

Val Glu Leu Leu Pro Val Asn Gly Glu Phe Ser Leu Asp Asp Leu Gln
530 535 540

Pro Trp His Ser Phe Gly Ala Asp Ser Val Pro Ala Asn Thr Glu Asn
545 550 555 560

Glu Val Glu Pro Val Asp Ala Arg Pro Ala Ala Asp Arg Gly Leu Thr
565 570 575

UNITED STATES PATENT AND TRADEMARK OFFICE
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DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

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It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Thr Arg Pro Gly Ser Gly Leu Thr Asn Ile Lys Thr Glu Glu Ile Ser
580 585 590
Glu Val Asn Leu Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val
595 600 605
His His Gln Lys Leu Val Phe Phe Ala Glu Asp Val Gly Ser Asn Lys
610 615 620
Gly Ala Ile Ile Gly Leu Met Val Gly Gly Val Val Ile Ala Thr Val
625 630 635 640
Ile Val Ile Thr Leu Val Met Leu Lys Lys Lys Gln Tyr Thr Ser Ile
645 650 655
His His Gly Val Val Glu Val Asp Ala Ala Val Thr Pro Glu Glu Arg
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His Leu Ser Lys Met Gln Gln Asn Gly Tyr Glu Asn Pro Thr Tyr Lys
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Phe Phe Glu Gln Met Gln Asn Lys Lys
690 695

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<211> 2094
<212> DNA
<213> Homo sapiens

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ctgaacatgc acatgaatgt ccagaatggg aagtgggatt cagatccatc agggacacaa 180
acctgcattg ataccaagga aggcatoctg cagtattgcc aagaagtcta cctgaactg 240
cagatcacca atgtggtaga agccaacca cagtgacca tccagaactg gtgcaagcgg 300
ggccgcgaagc agtgcaagac ccacccacac tttgtgatc cctaccgctg cttagtgggt 360
gagtttgtaa gtgatgcctt tctcgttctt gacaaagtga aattcttaca ccaggagagg 420
atggatgttt gcgaaactca tcttcactgg cacaccgtcg ccaagagagac atgcagtggg 480
aagagtaacca acttgcatga ctacggcatg ttgctgcctt gcggaattga caagttccga 540
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gcggaggagg atgactcgga tgtctggtgg ggccggagcag acacagacta tgcagatggg 660
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gaagccgatg atgacgagga cagtgaggat ggtgatgagg tagaggaaga ggcagaggaa 780
ccctacgaag aagccacaga gagaaccacc agcattgcca ccaccaccac caccacacac 840
gagtcctggtg aagaggtggt tccagttcct acaacagcag ccagtaacct tgatgcctgt 900
gacaagtatc tccagacacc tggggatgag aatgaacatg cccatttcca gaagcccaa 960
gagagggttg aggcgaagca ccgagagaga atgtcccagg tcatgagaga atgggaagag 1020
gcagaacgtc aagcaagaa ctgtgcctaaa gctgataaga aggcagttat ccagcatttc 1080
caggagaaag tgggaatcttt ggaacaggaa gcagccaacg agagacagca gctgggtggg 1140
acacacatgg ccagagtggg agccatgctc aatgaccgac gccgcctggc cctgggagaa 1200
tacatcaccc ctctgcaggc tgttcctcct cggcctcgct acgtgttcaa tatgctaaag 1260
aagtatgtcc gcgcagaaca gaaggacaga cagcacaccc taaagcattt cgagcatgtg 1320
cgcattggtg atcccaagaa agccgctcag atccggctcc aggttatgac acacctccgt 1380
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gtcttggcca acatgattag tgaaccaagg atcagttacg gaaacgatgc totcatgcca 1560
tctttgaccg aaacgaaaac caccgtggag ctccctcccg tgaatggaga gttcagcctg 1620
gacgatctcc agccgtggca ttcttttggg gctgactctg tgccagccaa cacagaaaac 1680
gaagttagac ctgttgatgc ccgcctgct gccgaaccag gactgaccac tccaccaggt 1740
tctgggttga caaatatcaa gacggaggag atctctgaag tgaagatgga tgcagaattc 1800
cgacatgact caggatgata agttcatcat caaaaattgg tgttctttgc agaagatgtg 1860
ggttcaaaaca aaggtgcaat cattggactc atgggtggcg gtgtgtcat agcgacagtg 1920

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
APPLICATION NO. : 09/869414
DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 30 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

atcttcacac ccttggtgat gctgaagaag aaacagtaca catccattca tcatggtgtg 1980
gtggaggttg acgccgtgt caccacagag gagcgccacc tgtccaagat gcagcagaac 2040
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<210> 20
<211> 697
<212> PRT
<213> Homo sapiens

<400> 20
Met Leu Pro Gly Leu Ala Leu Leu Leu Leu Ala Ala Trp Thr Ala Arg
1 5 10 15

Ala Leu Glu Val Pro Thr Asp Gly Asn Ala Gly Leu Leu Ala Glu Pro
20 25 30

Gln Ile Ala Met Phe Cys Gly Arg Leu Asn Met His Met Asn Val Gln
35 40 45

Asn Gly Lys Trp Asp Ser Asp Pro Ser Gly Thr Lys Thr Cys Ile Asp
50 55 60

Thr Lys Glu Gly Ile Leu Gln Tyr Cys Gln Glu Val Tyr Pro Glu Leu
65 70 75 80

Gln Ile Thr Asn Val Val Glu Ala Asn Gln Pro Val Thr Ile Gln Asn
85 90 95

Trp Cys Lys Arg Gly Arg Lys Gln Cys Lys Thr His Pro His Phe Val
100 105 110

Ile Pro Tyr Arg Cys Leu Val Gly Glu Phe Val Ser Asp Ala Leu Leu
115 120 125

Val Pro Asp Lys Cys Lys Phe Leu His Gln Glu Arg Met Asp Val Cys
130 135 140

Glu Thr His Leu His Trp His Thr Val Ala Lys Glu Thr Cys Ser Glu
145 150 155 160

Lys Ser Thr Asn Leu His Asp Tyr Gly Met Leu Leu Pro Cys Gly Ile
165 170 175

Asp Lys Phe Arg Gly Val Glu Phe Val Cys Cys Pro Leu Ala Glu Glu
180 185 190

Ser Asp Asn Val Asp Ser Ala Asp Ala Glu Glu Asp Asp Ser Asp Val
195 200 205

Trp Trp Gly Gly Ala Asp Thr Asp Tyr Ala Asp Gly Ser Glu Asp Lys
210 215 220

Val Val Glu Val Ala Glu Glu Glu Glu Val Ala Glu Val Glu Glu Glu
225 230 235 240

Glu Ala Asp Asp Asp Glu Asp Asp Glu Asp Gly Asp Glu Val Glu Glu
245 250 255

Glu Ala Glu Glu Pro Tyr Glu Glu Ala Thr Glu Arg Thr Thr Ser Ile
260 265 270

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PATENT NO. : 6,790,610 B2
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DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 31 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Ala Thr Thr Thr Thr Thr Thr Thr Glu Ser Val Glu Glu Val Val Arg
275 280 285

Val Pro Thr Thr Ala Ala Ser Thr Pro Asp Ala Val Asp Lys Tyr Leu
290 295 300

Glu Thr Pro Gly Asp Glu Asn Glu His Ala His Phe Gln Lys Ala Lys
305 310 315 320

Glu Arg Leu Glu Ala Lys His Arg Glu Arg Met Ser Gln Val Met Arg
325 330 335

Glu Trp Glu Glu Ala Glu Arg Gln Ala Lys Asn Leu Pro Lys Ala Asp
340 345 350

Lys Lys Ala Val Ile Gln His Phe Gln Glu Lys Val Glu Ser Leu Glu
355 360 365

Gln Glu Ala Ala Asn Glu Arg Gln Gln Leu Val Glu Thr His Met Ala
370 375 380

Arg Val Glu Ala Met Leu Asn Asp Arg Arg Arg Leu Ala Leu Glu Asn
385 390 395 400

Tyr Ile Thr Ala Leu Gln Ala Val Pro Pro Arg Pro Arg His Val Phe
405 410 415

Asn Met Leu Lys Lys Tyr Val Arg Ala Glu Gln Lys Asp Arg Gln His
420 425 430

Thr Leu Lys His Phe Glu His Val Arg Met Val Asp Pro Lys Lys Ala
435 440 445

Ala Gln Ile Arg Ser Gln Val Met Thr His Leu Arg Val Ile Tyr Glu
450 455 460

Arg Met Asn Gln Ser Leu Ser Leu Leu Tyr Asn Val Pro Ala Val Ala
465 470 475 480

Glu Glu Ile Gln Asp Glu Val Asp Glu Leu Leu Gln Lys Glu Gln Asn
485 490 495

Tyr Ser Asp Asp Val Leu Ala Asn Met Ile Ser Glu Pro Arg Ile Ser
500 505 510

Tyr Gly Asn Asp Ala Leu Met Pro Ser Leu Thr Glu Thr Lys Thr Thr
515 520 525

Val Glu Leu Leu Pro Val Asn Gly Glu Phe Ser Leu Asp Asp Leu Gln
530 535 540

Pro Trp His Ser Phe Gly Ala Asp Ser Val Pro Ala Asn Thr Glu Asn
545 550 555 560

Glu Val Glu Pro Val Asp Ala Arg Pro Ala Ala Asp Arg Gly Leu Thr
565 570 575

Thr Arg Pro Gly Ser Gly Leu Thr Asn Ile Lys Thr Glu Glu Ile Ser
580 585 590

Glu Val Lys Met Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val

UNITED STATES PATENT AND TRADEMARK OFFICE
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PATENT NO. : 6,790,610 B2
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DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

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It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

595 600 605
His His Gln Lys Leu Val Phe Phe Ala Glu Asp Val Gly Ser Asn Lys
610 615 620
Gly Ala Ile Ile Gly Leu Met Val Gly Gly Val Val Ile Ala Thr Val
625 630 635 640
Ile Phe Ile Thr Leu Val Met Leu Lys Lys Lys Gln Tyr Thr Ser Ile
645 650 655
His His Gly Val Val Glu Val Asp Ala Ala Val Thr Pro Glu Glu Arg
660 665 670
His Leu Ser Lys Met Gln Gln Asn Gly Tyr Glu Asn Pro Thr Tyr Lys
675 680 685
Phe Phe Glu Gln Met Gln Asn Lys Lys
690 695

<210> 21
<211> 1341
<212> DNA
<213> Homo sapiens

<400> 21
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gacgaagagc ccgaggagcc cggccggagg ggcagctttg tggagatggg ggacaacctg 180
aggggcaagt cggggcaggg ctactacgtg gagatgaccg tgggcagccc cccgcagacg 240
ctcaacatcc tgggtggatg aggcagcagt aactttgcag tgggtgctgc cccccacccc 300
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gtgtatgtgc cctacaccca gggcaagtgg gaaggggago tgggcacoga cotggttaagc 420
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gccaggcctg acgactccct ggagccttct tttgactctc tggtaaagca gaoccacgtt 600
cccaacctct tctccctgca cctttgtggg gctgggttcc cctcaacca gtctgaagtg 660
ctggcctctg tgggaggagg catgatcatt ggaggtatcg accactcgct gtacacaggg 720
agtctctggg atacacccat ccggcgggag tggattatg aggtcatcat tgtgcgggtg 780
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tccatcaagg cagcctcctc caaggagaag ttcctgatg gtttctggct agggagagcag 960
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ctaattgggtg aggttaccaa ccagtccttc cgcacaccaa tccttcgca gcaataoctg 1080
cggccagtgg aagatgtggc cactgccaa gacgactgtt acaagtttg catctcacag 1140
tcacccacgg gactgttat gggagctgtt atcatggagg gcttctacgt tgtctttgat 1200
cgggcccga aacgaattgg ctttgcgtgc agcgttgc atgtgcacga tgagttcagg 1260
acggcagcgg tgggaagccc tttgtgcacc ttggacatgg aagactgtgg ctacaacatt 1320
ccacagacag atgagtcagt a 1341

<210> 22
<211> 446
<212> PRT
<213> Homo sapiens

<400> 22
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His Gly Ile Arg Leu Pro Leu Arg Ser Gly Leu Gly Gly Ala Pro Leu

UNITED STATES PATENT AND TRADEMARK OFFICE

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 INVENTOR(S) : Mark E. Gurney et al.

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It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

20	25	30
Gly Leu Arg 35	Leu Pro Arg Glu Thr Asp 40	Glu Glu Pro Glu Glu Pro Gly 45
Arg Arg Gly 50	Ser Phe Val Glu Met Val Asp Asn 55	Leu Arg Gly Lys Ser 60
Gly Gln Gly Tyr Tyr 65	Val Glu Met Thr Val 70	Gly Ser Pro Pro Gln Thr 75 80
Leu Asn Ile 85	Leu Val Asp Thr Gly Ser Ser Asn Phe Ala Val 90	Gly Ala 95
Ala Pro His 100	Pro Phe Leu His Arg Tyr Tyr Gln Arg Gln Leu Ser Ser 105 110	
Thr Tyr Arg 115	Asp Leu Arg Lys Gly Val Tyr Val Pro Tyr Thr Gln Gly 120 125	
Lys Trp Glu Gly Glu Leu Gly Thr Asp Leu Val Ser Ile Pro His Gly 130 135		140
Pro Asn Val Thr Val Arg Ala Asn Ile Ala Ala Ile Thr Glu Ser Asp 145 150		155 160
Lys Phe Phe Ile Asn Gly Ser Asn Trp Glu Gly Ile Leu Gly Leu Ala 165 170		175
Tyr Ala Glu Ile Ala Arg Pro Asp Asp Ser Leu Glu Pro Phe Phe Asp 180 185		190
Ser Leu Val Lys Gln Thr His Val Pro Asn Leu Phe Ser Leu His Leu 195 200		205
Cys Gly Ala Gly Phe Pro Leu Asn Gln Ser Glu Val Leu Ala Ser Val 210 215		220
Gly Gly Ser Met Ile Ile Gly Gly Ile Asp His Ser Leu Tyr Thr Gly 225 230		235 240
Ser Leu Trp Tyr Thr Pro Ile Arg Arg Glu Trp Tyr Tyr Glu Val Ile 245 250		255
Ile Val Arg Val Glu Ile Asn Gly Gln Asp Leu Lys Met Asp Cys Lys 260 265		270
Glu Tyr Asn Tyr Asp Lys Ser Ile Val Asp Ser Gly Thr Thr Asn Leu 275 280		285
Arg Leu Pro Lys Lys Val Phe Glu Ala Ala Val Lys Ser Ile Lys Ala 290 295		300
Ala Ser Ser Thr Glu Lys Phe Pro Asp Gly Phe Trp Leu Gly Glu Gln 305 310		315 320
Leu Val Cys Trp Gln Ala Gly Thr Thr Pro Trp Asn Ile Phe Pro Val 325 330		335
Ile Ser Leu Tyr Leu Met Gly Glu Val Thr Asn Gln Ser Phe Arg Ile 340 345		350

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APPLICATION NO. : 09/869414
DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

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It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Thr Ile Leu Pro Gln Gln Tyr Leu Arg Pro Val Glu Asp Val Ala Thr
355 360 365
Ser Gln Asp Asp Cys Tyr Lys Phe Ala Ile Ser Gln Ser Ser Thr Gly
370 375 380
Thr Val Met Gly Ala Val Ile Met Glu Gly Phe Tyr Val Val Phe Asp
385 390 395 400
Arg Ala Arg Lys Arg Ile Gly Phe Ala Val Ser Ala Cys His Val His
405 410 415
Asp Glu Phe Arg Thr Ala Ala Val Glu Gly Pro Phe Val Thr Leu Asp
420 425 430
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435 440 445

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<211> 1380
<212> DNA
<213> Homo sapiens

<400> 23
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ggggcgcccc ccttggggct ggggtgcgcc cgggagaccg acgaagagcc cgaggagccc 180
ggccggaggg gcagotttgt ggagatgggt gacaacctga ggggcaagtc ggggcagggc 240
tactacgttg agatgacgtt gggcagcccc ccgcagacgc tcaacatcct ggtggatata 300
ggcagcagta actttgcagt ggggtgctgcc cccacccct tctgcatcg ctactaccag 360
aggcagctgt ccagcacata cggggacctc cgggaagggtg tgtatgtgcc ctacaccag 420
ggcaagtggg aaggggagct gggcacggac ctggttaagca tccccatgg ccccaacgtc 480
actgtgcgtg ccaacattgc tgccatcact gaacagaca agttcttcat caacggctcc 540
aaatgggaag gaactcctgg gtggcctat gctgagattg ccaggcctga gaactccctg 600
gagcctttct ttgactctct ggtaaagcag acccacgttc ccaacctctt ctccctgcac 660
ctttgtgggt ctggcttccc cctcaaccag tctgaagtgc tggcctctgt cggaggggagc 720
atgatcattg gaggtatoga coactcgctg tacacaggca gtctctggta tacaccatc 780
cggcgggagt ggtattatga ggtcatcatt gtgcgggtgg agatcaatgg acaggatctg 840
aaaatggact gcaaggagta caactatgao aagagcattg tggacagtgg caacaccaac 900
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<210> 24
<211> 459
<212> PRT
<213> Homo sapiens

<400> 24
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Ile Ser Asp Ser Pro Arg Glu Gln Asp Gly Ser Thr Gln His Gly Ile
20 25 30
Arg Leu Pro Leu Arg Ser Gly Leu Gly Gly Ala Pro Leu Gly Leu Arg

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PATENT NO. : 6,790,610 B2
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DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 35 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

35	40	45
Leu Pro Arg Glu Thr Asp Glu Glu Pro Glu Glu Pro Gly Arg Arg Gly		
50	55	60
Ser Phe Val Glu Met Val Asp Asn Leu Arg Gly Lys Ser Gly Gln Gly		
65	70	75
Tyr Tyr Val Glu Met Thr Val Gly Ser Pro Pro Gln Thr Leu Asn Ile		
85	90	95
Leu Val Asp Thr Gly Ser Ser Asn Phe Ala Val Gly Ala Ala Pro His		
100	105	110
Pro Phe Leu His Arg Tyr Tyr Gln Arg Gln Leu Ser Ser Thr Tyr Arg		
115	120	125
Asp Leu Arg Lys Gly Val Tyr Val Pro Tyr Thr Gln Gly Lys Trp Glu		
130	135	140
Gly Glu Leu Gly Thr Asp Leu Val Ser Ile Pro His Gly Pro Asn Val		
145	150	155
Thr Val Arg Ala Asn Ile Ala Ala Ile Thr Glu Ser Asp Lys Phe Phe		
165	170	175
Ile Asn Gly Ser Asn Trp Glu Gly Ile Leu Gly Leu Ala Tyr Ala Glu		
180	185	190
Ile Ala Arg Pro Asp Asp Ser Leu Glu Pro Phe Phe Asp Ser Leu Val		
195	200	205
Lys Gln Thr His Val Pro Asn Leu Phe Ser Leu His Leu Cys Gly Ala		
210	215	220
Gly Phe Pro Leu Asn Gln Ser Glu Val Leu Ala Ser Val Gly Gly Ser		
225	230	235
Met Ile Ile Gly Gly Ile Asp His Ser Leu Tyr Thr Gly Ser Leu Trp		
245	250	255
Tyr Thr Pro Ile Arg Arg Glu Trp Tyr Tyr Glu Val Ile Ile Val Arg		
260	265	270
Val Glu Ile Asn Gly Gln Asp Leu Lys Met Asp Cys Lys Glu Tyr Asn		
275	280	285
Tyr Asp Lys Ser Ile Val Asp Ser Gly Thr Thr Asn Leu Arg Leu Pro		
290	295	300
Lys Lys Val Phe Glu Ala Ala Val Lys Ser Ile Lys Ala Ala Ser Ser		
305	310	315
Thr Glu Lys Phe Pro Asp Gly Phe Trp Leu Gly Glu Gln Leu Val Cys		
325	330	335
Trp Gln Ala Gly Thr Thr Pro Trp Asn Ile Phe Pro Val Ile Ser Leu		
340	345	350
Tyr Leu Met Gly Glu Val Thr Asn Gln Ser Phe Arg Ile Thr Ile Leu		
355	360	365

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
APPLICATION NO. : 09/869414
DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 36 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Pro Gln Gln Tyr Leu Arg Pro Val Glu Asp Val Ala Thr Ser Gln Asp
370 375 380

Asp Cys Tyr Lys Phe Ala Ile Ser Gln Ser Ser Thr Gly Thr Val Met
385 390 395 400

Gly Ala Val Ile Met Glu Gly Phe Tyr Val Val Phe Asp Arg Ala Arg
405 410 415

Lys Arg Ile Gly Phe Ala Val Ser Ala Cys His Val His Asp Glu Phe
420 425 430

Arg Thr Ala Ala Val Glu Gly Pro Phe Val Thr Leu Asp Met Glu Asp
435 440 445

Cys Gly Tyr Asn Ile Pro Gln Thr Asp Glu Ser
450 455

<210> 25
<211> 1302
<212> DNA
<213> Homo sapiens

<400> 25
atgactcagc atggtattog tctgcccactg cgtagcggtc tgggtgggtgc tcoactgggt 60
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gtggagatgg tggacaacct gaggggcaag tccggggcagg gctactacgt ggagatgacc 180
gtgggcagcc cccgcagac gotaacatc ctggtggata caggcagcag taactttgca 240
gtgggtgctg cccccaccc cttctcgtcat cgctactacc agaggcagct gtccagcaca 300
taccgggacc tccggaaggg tgtgtatgtg ccctacaccc agggcaagtg ggaaggggag 360
ctgggcaccg acctggtaag catcccccat ggccccaaag tcaactgtgc tgccaacatt 420
gctgccatca ctgaatcaga caagtcttc atcaacggct ccaactggga aggcatectg 480
gggttggcct atgctgagat tggcaggcct gacgactccc tggagccttt ctttgactct 540
ctggttaaga agaccacgt toccaacctc ttctccctgc acctttgtgg tgggtggcttc 600
ccctcaacc agtctgaagt gctggcctct gtcggaggga gcatgatcat tggaggatc 660
gaccactcgc tgtacacagg cagtctctgg tatacaccca tccggcggga gtggtattat 720
gaggtcatca ttgtgcgggt ggagatcaat ggacaggate tgaaaatgga ctgcaaggag 780
tacaactatg acaagagcat tgtggacagt ggcaccacca accttcgttt gcccaagaaa 840
gtgtttgaag ctgcagtcac atccatcaag gcagcctcct ccacggagaa gttccctgat 900
ggtttctggc taggagagca gctggtgtgc tggcaagcag gcaccacccc ttggaacatt 960
ttcccagtc tctcactcta cctaattgggt gaggttacc aaccagtcct ccgcatcacc 1020
atcctccgc agcaatacct ggggcagtg gaagatgtgg ccaagtcacca agacgactgt 1080
tacaagtttg ccatctcaac gtcacccaag ggcactgtta tgggagctgt tatcatggag 1140
ggcttctacg ttgtctttga tccggcccca aaacgaattg gctttgtgt cagcgcttgc 1200
catgtgcacg atgagttcag gacggcagcg gtggaaggcc cttttgtcac cttggacatg 1260
gaagactgtg gctacaacat tccacagaca gatgagtcac ga 1302

<210> 26
<211> 433
<212> PRT
<213> Homo sapiens

<400> 26
Met Thr Gln His Gly Ile Arg Leu Pro Leu Arg Ser Gly Leu Gly Gly
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Ala Pro Leu Gly Leu Arg Leu Pro Arg Glu Thr Asp Glu Glu Pro Glu
20 25 30

Glu Pro Gly Arg Arg Gly Ser Phe Val Glu Met Val Asp Asn Leu Arg
35 40 45

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Gly	Lys	Ser	Gly	Gln	Gly	Tyr	Tyr	Val	Glu	Met	Thr	Val	Gly	Ser	Pro	50	55	60
Pro	Gln	Thr	Leu	Asn	Ile	Leu	Val	Asp	Thr	Gly	Ser	Ser	Asn	Phe	Ala	65	70	75
Val	Gly	Ala	Ala	Pro	His	Pro	Phe	Leu	His	Arg	Tyr	Tyr	Gln	Arg	Gln	85	90	95
Leu	Ser	Ser	Thr	Tyr	Arg	Asp	Leu	Arg	Lys	Gly	Val	Tyr	Val	Pro	Tyr	100	105	110
Thr	Gln	Gly	Lys	Trp	Glu	Gly	Glu	Leu	Gly	Thr	Asp	Leu	Val	Ser	Ile	115	120	125
Pro	His	Gly	Pro	Asn	Val	Thr	Val	Arg	Ala	Asn	Ile	Ala	Ala	Ile	Thr	130	135	140
Glu	Ser	Asp	Lys	Phe	Phe	Ile	Asn	Gly	Ser	Asn	Trp	Glu	Gly	Ile	Leu	145	150	155
Gly	Leu	Ala	Tyr	Ala	Glu	Ile	Ala	Arg	Pro	Asp	Asp	Ser	Leu	Glu	Pro	165	170	175
Phe	Phe	Asp	Ser	Leu	Val	Lys	Gln	Thr	His	Val	Pro	Asn	Leu	Phe	Ser	180	185	190
Leu	His	Leu	Cys	Gly	Ala	Gly	Phe	Pro	Leu	Asn	Gln	Ser	Glu	Val	Leu	195	200	205
Ala	Ser	Val	Gly	Gly	Ser	Met	Ile	Ile	Gly	Gly	Ile	Asp	His	Ser	Leu	210	215	220
Tyr	Thr	Gly	Ser	Leu	Trp	Tyr	Thr	Pro	Ile	Arg	Arg	Glu	Trp	Tyr	Tyr	225	230	235
Glu	Val	Ile	Ile	Val	Arg	Val	Glu	Ile	Asn	Gly	Gln	Asp	Leu	Lys	Met	245	250	255
Asp	Cys	Lys	Glu	Tyr	Asn	Tyr	Asp	Lys	Ser	Ile	Val	Asp	Ser	Gly	Thr	260	265	270
Thr	Asn	Leu	Arg	Leu	Pro	Lys	Lys	Val	Phe	Glu	Ala	Ala	Val	Lys	Ser	275	280	285
Ile	Lys	Ala	Ala	Ser	Ser	Thr	Glu	Lys	Phe	Pro	Asp	Gly	Phe	Trp	Leu	290	295	300
Gly	Glu	Gln	Leu	Val	Cys	Trp	Gln	Ala	Gly	Thr	Thr	Pro	Trp	Asn	Ile	305	310	315
Phe	Pro	Val	Ile	Ser	Leu	Tyr	Leu	Met	Gly	Glu	Val	Thr	Asn	Gln	Ser	325	330	335
Phe	Arg	Ile	Thr	Ile	Leu	Pro	Gln	Gln	Tyr	Leu	Arg	Pro	Val	Glu	Asp	340	345	350
Val	Ala	Thr	Ser	Gln	Asp	Asp	Cys	Tyr	Lys	Phe	Ala	Ile	Ser	Gln	Ser	355	360	365
Ser	Thr	Gly	Thr	Val	Met	Gly	Ala	Val	Ile	Met	Glu	Gly	Phe	Tyr	Val	370	375	380

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INVENTOR(S) : Mark E. Gurney et al.

Page 38 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Val Phe Asp Arg Ala Arg Lys Arg Ile Gly Phe Ala Val Ser Ala Cys
385 390 395 400

His Val His Asp Glu Phe Arg Thr Ala Ala Val Glu Gly Pro Phe Val
405 410 415

Thr Leu Asp Met Glu Asp Cys Gly Tyr Asn Ile Pro Gln Thr Asp Glu
420 425 430

Ser

<210> 27
<211> 1278
<212> DNA
<213> Homo sapiens

<400> 27
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ccgctggact ctggtatcga aacogacgga tcctttgtgg agatggtgga caacctgagg 120
ggcaagtcgg ggcagggtcta ctacgtggag atgacgtgg gcagcccccc gcagacgtct 180
aacatccctgg tggatacagg cagcagtaac ttgacgtgg gtgctgcccc ccccccttc 240
ctgcatcgct actaccagag gcagctgtcc agcacatacc gggacctccg gaagggtgtg 300
tatgtgcctt acacccaggg caagtgggaa ggggagctgg gcacogacct ggtaagcatc 360
ccccatggcc ccaacgtcac tgtgcgtgcc aacattgctg coactactga atcagacaag 420
ttcttcatca acggctccaa ctgggaaggg atcctggggc tggcctatgc tgagattgcc 480
aggoctgaag actccctgga gcctttcttt gactctctgg taaagcagac ccacgttccc 540
aacctcttct ccttcacact ttgtggtgct ggcttcccc tcaaccagtc tgaagtgtcg 600
gcctctgtcg gaggagcat gatcattgga ggtatcgacc actcgtctga cacaggcagt 660
ctctggtata caccatccg gcgggagtggt tattatgagg tcatcattgt gcgggtggag 720
atcaatggac aggatctgaa aatggactgc aaggagtaca actatgacaa gagcattgtg 780
gacagtggca ccccaacct tcgtttgcc aagaaagtgt ttgaagctgc agtcaaatcc 840
atcaaggcag cctcctccac ggagaagttc cctgatggtt tctggotagg agagcagctg 900
gtgtgctggc aagcaggcac cacccttggg aacattttcc cagtcattct actctaccta 960
atgggtgagg ttaccaacca gtccttcgc atcaccatcc ttccgcagca atacctcgg 1020
ccagtggag atgtggccac gtcccaagac gactgttaoa agtttgcct ctcacagtc 1080
tccacgggca ctgttatggg agctgttatc atggagggt tctacgttgt ctttgatcgg 1140
gcccgaatac gaattggctt tgctgtcagc gcttgccatg tgcacgatga gttcaggacg 1200
gcagcgggtg aaggcccttt tgtcaccttg gacatggaag actgtggcta caacattcca 1260
cagacagatg agtcatga 1278

<210> 28
<211> 425
<212> PRT
<213> Homo sapiens

<400> 28
Met Ala Ser Met Thr Gly Gly Gln Gln Met Gly Arg Gly Ser Met Thr
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Ile Ser Asp Ser Pro Leu Asp Ser Gly Ile Glu Thr Asp Gly Ser Phe
20 25 30
Val Glu Met Val Asp Asn Leu Arg Gly Lys Ser Gly Gln Gly Tyr Tyr
35 40 45
Val Glu Met Thr Val Gly Ser Pro Pro Gln Thr Leu Asn Ile Leu Val
50 55 60
Asp Thr Gly Ser Ser Asn Phe Ala Val Gly Ala Ala Pro His Pro Phe
65 70 75 80
Leu His Arg Tyr Tyr Gln Arg Gln Leu Ser Ser Thr Tyr Arg Asp Leu
85 90 95

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Page 39 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Arg Lys Gly Val Tyr Val Pro Tyr Thr Gln Gly Lys Trp Glu Gly Glu
 100 105 110

Leu Gly Thr Asp Leu Val Ser Ile Pro His Gly Pro Asn Val Thr Val
 115 120 125

Arg Ala Asn Ile Ala Ala Ile Thr Glu Ser Asp Lys Phe Phe Ile Asn
 130 135 140

Gly Ser Asn Trp Glu Gly Ile Leu Gly Leu Ala Tyr Ala Glu Ile Ala
 145 150 155 160

Arg Pro Asp Asp Ser Leu Glu Pro Phe Phe Asp Ser Leu Val Lys Gln
 165 170 175

Thr His Val Pro Asn Leu Phe Ser Leu His Leu Cys Gly Ala Gly Phe
 180 185 190

Pro Leu Asn Gln Ser Glu Val Leu Ala Ser Val Gly Gly Ser Met Ile
 195 200 205

Ile Gly Gly Ile Asp His Ser Leu Tyr Thr Gly Ser Leu Trp Tyr Thr
 210 215 220

Pro Ile Arg Arg Glu Trp Tyr Tyr Glu Val Ile Ile Val Arg Val Glu
 225 230 235 240

Ile Asn Gly Gln Asp Leu Lys Met Asp Cys Lys Glu Tyr Asn Tyr Asp
 245 250 255

Lys Ser Ile Val Asp Ser Gly Thr Thr Asn Leu Arg Leu Pro Lys Lys
 260 265 270

Val Phe Glu Ala Ala Val Lys Ser Ile Lys Ala Ala Ser Ser Thr Glu
 275 280 285

Lys Phe Pro Asp Gly Phe Trp Leu Gly Glu Gln Leu Val Cys Trp Gln
 290 295 300

Ala Gly Thr Thr Pro Trp Asn Ile Phe Pro Val Ile Ser Leu Tyr Leu
 305 310 315 320

Met Gly Glu Val Thr Asn Gln Ser Phe Arg Ile Thr Ile Leu Pro Gln
 325 330 335

Gln Tyr Leu Arg Pro Val Glu Asp Val Ala Thr Ser Gln Asp Asp Cys
 340 345 350

Tyr Lys Phe Ala Ile Ser Gln Ser Ser Thr Gly Thr Val Met Gly Ala
 355 360 365

Val Ile Met Glu Gly Phe Tyr Val Val Phe Asp Arg Ala Arg Lys Arg
 370 375 380

Ile Gly Phe Ala Val Ser Ala Cys His Val His Asp Glu Phe Arg Thr
 385 390 395 400

Ala Ala Val Glu Gly Pro Phe Val Thr Leu Asp Met Glu Asp Cys Gly
 405 410 415

Tyr Asn Ile Pro Gln Thr Asp Glu Ser
 420 425

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PATENT NO. : 6,790,610 B2
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DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 40 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

<210> 29
<211> 1362
<212> DNA
<213> Homo sapiens

<400> 29
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ctgcggctgc cccgggagac cgacgaagag ccgaggagc ccggccggag gggcagcttt 180
gtggagatgg tggacaacct gaggggcaag tcggggcagg gctactacgt ggagatgacc 240
gtgggcagcc ccccgagac gctcaacatc ctggtggata caggcagcag taactttgca 300
tggggtgctg cccccaccc ctctctgcat cgctactacc agaggcagct gtccagcaca 360
taccgggacc tccggaaggg tgtgtatgtg ccctacaccc agggcaagtg ggaaggggag 420
ctgggcaccg acctggtaag catcccccac ggccccaacg tctactgtcg tgccaacatt 480
gctgccatca ctgaatcaga caagttcttc atcaacggct ccaactggga aggcacccct 540
gggctggcct atgctgagat tgccaggcct gacgactccc tggagccttt ctttgactct 600
ctggtaaagc agaccacgt tcccaacctc ttctccctgc acctttgtgg tgctggcttc 660
ccccccaacc agtctgaagt gctggcctct gtccggaggga gcctgatcat tggaggatc 720
gaccactcgc tgtacacagg cagtctctgg tatacaccca tccggcgagg gtggtattat 780
gaggatcatc ttgtgcgggt ggagatcaat ggacaggatc tgaaaatgga ctgcaaggag 840
tacaactatg acaagagcat tgtggacagt ggcaccacca accttcgttt gcccagaaga 900
gtgtttgaag tgcagtaaa atccatcaag gcagcctcct ccacggagaa gttccctgat 960
ggttttctggc ttggagagca gctggtgtgc tggcaagcag gcaccacccc ttggaacatt 1020
ttcccagtc tctcactcta cctaattgggt gaggttacca accagtcctt ccgcatcacc 1080
atccttcgc agcaatacct gcggccagtg gaagatgtgg ccacgtccca agacgactgt 1140
tacaagtttg ccatctcaca gtcattccac ggcactgtta tgggagctgt tatcatggag 1200
ggcttctacg ttgtctttga tggggcccg aaacgaattg gctttgctgt cagcgttgc 1260
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gaagactgtg gctacaacat tccacagaca gatgagtcac ga 1362

<210> 30
<211> 453
<212> PRT
<213> Homo sapiens

<400> 30
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Leu Pro Ala His Gly Thr Gln His Gly Ile Arg Leu Pro Leu Arg Ser
20 25 30
Gly Leu Gly Gly Ala Pro Leu Gly Leu Arg Leu Pro Arg Glu Thr Asp
35 40 45
Glu Glu Pro Glu Glu Pro Gly Arg Arg Gly Ser Phe Val Glu Met Val
50 55 60
Asp Asn Leu Arg Gly Lys Ser Gly Gln Gly Tyr Tyr Val Glu Met Thr
65 70 75 80
Val Gly Ser Pro Pro Gln Thr Leu Asn Ile Leu Val Asp Thr Gly Ser
85 90 95
Ser Asn Phe Ala Val Gly Ala Ala Pro His Pro Phe Leu His Arg Tyr
100 105 110
Tyr Gln Arg Gln Leu Ser Ser Thr Tyr Arg Asp Leu Arg Lys Gly Val
115 120 125
Tyr Val Pro Tyr Thr Gln Gly Lys Trp Glu Gly Glu Leu Gly Thr Asp
130 135 140

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Leu Val Ser Ile Pro His Gly Pro Asn Val Thr Val Arg Ala Asn Ile
145 150 155 160

Ala Ala Ile Thr Glu Ser Asp Lys Phe Phe Ile Asn Gly Ser Asn Trp
165 170 175

Glu Gly Ile Leu Gly Leu Ala Tyr Ala Glu Ile Ala Arg Pro Asp Asp
180 185 190

Ser Leu Glu Pro Phe Phe Asp Ser Leu Val Lys Gln Thr His Val Pro
195 200 205

Asn Leu Phe Ser Leu Gln Leu Cys Gly Ala Gly Phe Pro Leu Asn Gln
210 215 220

Ser Glu Val Leu Ala Ser Val Gly Gly Ser Met Ile Ile Gly Gly Ile
225 230 235 240

Asp His Ser Leu Tyr Thr Gly Ser Leu Trp Tyr Thr Pro Ile Arg Arg
245 250 255

Glu Trp Tyr Tyr Glu Val Ile Ile Val Arg Val Glu Ile Asn Gly Gln
260 265 270

Asp Leu Lys Met Asp Cys Lys Glu Tyr Asn Tyr Asp Lys Ser Ile Val
275 280 285

Asp Ser Gly Thr Thr Asn Leu Arg Leu Pro Lys Lys Val Phe Glu Ala
290 295 300

Ala Val Lys Ser Ile Lys Ala Ala Ser Ser Thr Glu Lys Phe Pro Asp
305 310 315 320

Gly Phe Trp Leu Gly Glu Gln Leu Val Cys Trp Gln Ala Gly Thr Thr
325 330 335

Pro Trp Asn Ile Phe Pro Val Ile Ser Leu Tyr Leu Met Gly Glu Val
340 345 350

Thr Asn Gln Ser Phe Arg Ile Thr Ile Leu Pro Gln Gln Tyr Leu Arg
355 360 365

Pro Val Glu Asp Val Ala Thr Ser Gln Asp Asp Cys Tyr Lys Phe Ala
370 375 380

Ile Ser Gln Ser Ser Thr Gly Thr Val Met Gly Ala Val Ile Met Glu
385 390 395 400

Gly Phe Tyr Val Val Phe Asp Arg Ala Arg Lys Arg Ile Gly Phe Ala
405 410 415

Val Ser Ala Cys His Val His Asp Glu Phe Arg Thr Ala Ala Val Glu
420 425 430

Gly Pro Phe Val Thr Leu Asp Met Glu Asp Cys Gly Tyr Asn Ile Pro
435 440 445

Gln Thr Asp Glu Ser
450

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Page 42 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

<210> 31
<211> 1380
<212> DNA
<213> Homo sapiens

<400> 31
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ctgcggtgctg cccgggagag cgacgaagag cccgaggagc cgggcccggag gggcagcttt 180
gtggagatgg tggacaacct gagggggcaag tcggggcagg gctactacgt ggagatgacc 240
gtgggagcag ccccgagagc gctcaacatc ctggtggata caggcagcag taactttgca 300
gtgggtgctg ccccccaccc ctctcctgcat cgctactacc agaggcagct gtccagcaca 360
tacgggggac tccggaaggg tgtgtatgtg cctacacccc agggcaagtg ggaaggggag 420
ctgggacacc acctggttaag catcccccat ggcccacacg tcaactgtgc tgccaacatt 480
gctgcatca ctgaatcaga caagtctctc atcaacggct ccaactggga aggcacctg 540
gggctggcct atgctgagat tggcaggcct gacgactccc tggagccttt ctttgactct 600
ctggttaagc agaccacagt tcccaacctc ttctccctgc acctttgtgg tctggtctc 660
cccccaacc agtctgaagt gctggcctct gtccggaggga gcatgacatc tggaggatc 720
gaccactcgc ttgtacacag cagtctctgg tatacaccca tccggcggga gtggtattat 780
gaggatcatc ttgtgcgggt ggagatcaat ggacaggatc tgaaaatgga ctgcaaggag 840
tacaactatg acaagagcat tgtggacagt ggcaccacca accttcgttt gcccaagaaa 900
gtggttgaag ctgcagtcaa atccatcaag gcagcctcct ccacggagaa gtccctgat 960
gggtttctggc taggagagca gctggtgtgc tggcaagcag gcaccacccc ttggaacatt 1020
tccccagtc tctactcta cctaattgggt gaggttacca accagtcctt ccgcatcacc 1080
atccttccgc agcaatacct. gcgccagtg gaagatgtgg ccacgtccca agacgactgt 1140
tacaagtttg ccattctaca gtcattccag ggcactgtta tgggagctgt tatcatggag 1200
ggcttctacg ttgtctttga tccggcccgga aaacgaattg gctttgctgt cagcgcttgc 1260
catgtgcagc atgagttcag gacggcagcg gtggaaggcc cttttgtcac cttggacatg 1320
gaagactgtg gctacaacat tccacagaca gatgagtcac agcagcagca gcagcagtga 1380

<210> 32
<211> 459
<212> PRT
<213> Homo sapiens

<400> 32
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20 25 30
Gly Leu Gly Gly Ala Pro Leu Gly Leu Arg Leu Pro Arg Glu Thr Asp
35 40 45
Glu Glu Pro Glu Glu Pro Gly Arg Arg Gly Ser Phe Val Glu Met Val
50 55 60
Asp Asn Leu Arg Gly Lys Ser Gly Gln Gly Tyr Tyr Val Glu Met Thr
65 70 75 80
Val Gly Ser Pro Pro Gln Thr Leu Asn Ile Leu Val Asp Thr Gly Ser
85 90 95
Ser Asn Phe Ala Val Gly Ala Ala Pro His Pro Phe Leu His Arg Tyr
100 105 110
Tyr Gln Arg Gln Leu Ser Ser Thr Tyr Arg Asp Leu Arg Lys Gly Val
115 120 125
Tyr Val Pro Tyr Thr Gln Gly Lys Trp Glu Gly Glu Leu Gly Thr Asp
130 135 140

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DATED : September 14, 2004
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Leu Val Ser Ile Pro His Gly Pro Asn Val Thr Val Arg Ala Asn Ile
145 150 155 160

Ala Ala Ile Thr Glu Ser Asp Lys Phe Phe Ile Asn Gly Ser Asn Trp
165 170 175

Glu Gly Ile Leu Gly Leu Ala Tyr Ala Glu Ile Ala Arg Pro Asp Asp
180 185 190

Ser Leu Glu Pro Phe Phe Asp Ser Leu Val Lys Gln Thr His Val Pro
195 200 205

Asn Leu Phe Ser Leu Gln Leu Cys Gly Ala Gly Phe Pro Leu Asn Gln
210 215 220

Ser Glu Val Leu Ala Ser Val Gly Gly Ser Met Ile Ile Gly Gly Ile
225 230 235 240

Asp His Ser Leu Tyr Thr Gly Ser Leu Trp Tyr Thr Pro Ile Arg Arg
245 250 255

Glu Trp Tyr Tyr Glu Val Ile-Ile Val Arg Val Glu Ile Asn Gly Gln
260 265 270

Asp Leu Lys Met Asp Cys Lys Glu Tyr Asn Tyr Asp Lys Ser Ile Val
275 280 285

Asp Ser Gly Thr Thr Asn Leu Arg Leu Pro Lys Lys Val Phe Glu Ala
290 295 300

Ala Val Lys Ser Ile Lys Ala Ala Ser Ser Thr Glu Lys Phe Pro Asp
305 310 315 320

Gly Phe Trp Leu Gly Glu Gln Leu Val Cys Trp Gln Ala Gly Thr Thr
325 330 335

Pro Trp Asn Ile Phe Pro Val Ile Ser Leu Tyr Leu Met Gly Glu Val
340 345 350

Thr Asn Gln Ser Phe Arg Ile Thr Ile Leu Pro Gln Gln Tyr Leu Arg
355 360 365

Pro Val Glu Asp Val Ala Thr Ser Gln Asp Asp Cys Tyr Lys Phe Ala
370 375 380

Ile Ser Gln Ser Ser Thr Gly Thr Val Met Gly Ala Val Ile Met Glu
385 390 395 400

Gly Phe Tyr Val Val Phe Asp Arg Ala Arg Lys Arg Ile Gly Phe Ala
405 410 415

Val Ser Ala Cys His Val His Asp Glu Phe Arg Thr Ala Ala Val Glu
420 425 430

Gly Pro Phe Val Thr Leu Asp Met Glu Asp Cys Gly Tyr Asn Ile Pro
435 440 445

Gln Thr Asp Glu Ser His His His His His His
450 455

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
APPLICATION NO. : 09/869414
DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 44 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

<210> 33
<211> 25
<212> PRT
<213> Homo sapiens

<400> 33
Ser Glu Gln Gln Arg Arg Pro Arg Asp Pro Glu Val Val Asn Asp Glu
1 5 10 15
Ser Ser Leu Val Arg His Arg Trp Lys
20 25

<210> 34
<211> 19
<212> PRT
<213> Homo sapiens

<400> 34
Ser Glu Gln Leu Arg Gln Gln His Asp Asp Phe Ala Asp Asp Ile Ser
1 5 10 15
Leu Leu Lys

<210> 35
<211> 29
<212> DNA
<213> Homo sapiens

<400> 35
gtggatccac ccagcacggc atccggctg 29

<210> 36
<211> 36
<212> DNA
<213> Homo sapiens

<400> 36
gaaagctttc atgactcadc tgtctgtgga atgttg 36

<210> 37
<211> 39
<212> DNA
<213> Homo sapiens

<400> 37
gatcgatgac tatctctgac tctccgctg aacaggacg 39

<210> 38
<211> 39
<212> DNA
<213> Homo sapiens

<400> 38
gatccgtcct gttcacgagg agagtcagag atagtcac 39

<210> 39
<211> 77
<212> DNA
<213> Artificial Sequence

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
APPLICATION NO. : 09/869414
DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 45 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

<220>

<223> Description of Artificial Sequence: Hu-Asp2

<400> 39

cgccatccgg ctgccctgc gtagcggctc ggggggtgct cactgggtc tgcgtctgcc 60
cggggagacc gacgaag 77

<210> 40

<211> 77

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Hu-Asp2

<400> 40

cttcgtcggc ctccccgggc agacgcagac ccagtggagc accaccacaga ccgtacgca 60
ggggcagccg gatgccg 77

<210> 41

<211> 51

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Caspase 8
Cleavage Site

<400> 41

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<210> 42

<211> 51

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Caspase 8
Cleavage Site

<400> 42

gatccgtcgg ttccgatacc agagtccagc ggagagtcag agatagtcac c 51

<210> 43

<211> 32

<212> DNA

<213> Homo sapiens

<400> 43

aaggatcctt tgggagatg gtggacaacc tg 32

<210> 44

<211> 36

<212> DNA

<213> Homo sapiens

<400> 44

gaaagcttcc atgactcacc tgtctgtgga atgttg 36

<210> 45

<211> 24

<212> DNA

<213> Artificial Sequence

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
APPLICATION NO. : 09/869414
DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 46 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

<220>

<223> Description of Artificial Sequence: 6-His tag

<400> 45

gatcgcatca tcacccatcac catg 24

<210> 46

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: 6-His tag

<400> 46

gatccatggt gatggtgatg atgc 24

<210> 47

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 47

gactgaccac tcgaccaggt tc 22

<210> 48

<211> 51

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 48

cgaattaaat tccagcacac tggctacttc ttgttctgca tctcaaagaa c 51

<210> 49

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 49

cgaattaaat tccagcacac tggcta 26

<210> 50

<211> 1287

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Hu-Asp2(b)
delta TM

<400> 50

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ggcaccacagc acggcatccg gctgcccctg cgcagcggcc tgggggggag cccctggggg 120
ctgagggtgc cccgggagac cgacgaagag cccgaggagc cgggcccggag gggcagcttt 180

UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
 APPLICATION NO. : 09/869414
 DATED : September 14, 2004
 INVENTOR(S) : Mark E. Gurney et al.

Page 47 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

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gtggagatgg tggacaacct gaggggcaag tcggggcagg gctactacgt ggagatgacc 240
gtgggcagcc ccccgagac gctcaacatc ctggtggata caggcagcag taactttgca 300
gtgggtgctg ccccccaccc cttcctgcat cgctactacc agaggcagct gtccagcaca 360
taccggggacc tccggaaggg tgtgtatgtg ccctacaccc agggcaagtg ggaaggggag 420
ctgggcaccg acctggttaag catcccccat ggcccacag tcaactgtgcg tgccaacatt 480
gttgccatca ctgaatcaga caagtctctc atcaacggct ccaactggga aggcacctcg 540
gggctggcct atgctgagat tgccaggctt tgtggtgctg gcttccccct caaccagtct 600
gaagtgtctg cctctgtctg agggagcatg atcattggag gtatcgacca ctgctgtac 660
acaggcagtc tctgtgtatc acccatccgg cgggagtggt attatgaggt catcattgtg 720
cgggtggaga tcaatggaca ggatctgaaa atggactgca aggagtacaa ctatgacaag 780
agcattgtgg acagtggcac caccaacctt cgtttgcccc agaaagtgtt tgaagctgca 840
gtcaaatcca tcaaggcagc ctctccacg gagaagtcc ctgatgggtt ctggctagga 900
gagcagctgg tgtgctggca agcaggcacc accccttgga acattttccc agtcactca 960
ctctacctaa tgggtgaggt taccacccag tccttcgca tcaccatcct tccgcagcaa 1020
tacctcgccg cagtggaga tgtggccacg tcccaagacg actgttacaa gtttgccatc 1080
tcacagtcac ccacgggcac tgttatggga gctgttatca tggagggtt ctacgttgtc 1140
tttgatcggg cccgaaaacg aattggcttt gctgtcagcg cttgccatgt gcacgatgag 1200
ttcaggacgg cagcgggtgga aggcctttt gtcacctgg acatggaaga ctgtggctac 1260
aacattccac agacagatga gtcata 1287
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<210> 51
 <211> 428
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Hu-Asp2(b)
 delta TM

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<400> 51
Met Ala Gln Ala Leu Pro Trp Leu Leu Trp Met Gly Ala Gly Val
  1          5          10          15

Leu Pro Ala His Gly Thr Gln His Gly Ile Arg Leu Pro Leu Arg Ser
  20          25          30

Gly Leu Gly Gly Ala Pro Leu Gly Leu Arg Leu Pro Arg Glu Thr Asp
  35          40          45

Glu Glu Pro Glu Glu Pro Gly Arg Arg Gly Ser Phe Val Glu Met Val
  50          55          60

Asp Asn Leu Arg Gly Lys Ser Gly Gln Gly Tyr Tyr Val Glu Met Thr
  65          70          75          80

Val Gly Ser Pro Pro Gln Thr Leu Asn Ile Leu Val Asp Thr Gly Ser
  85          90          95

Ser Asn Phe Ala Val Gly Ala Ala Pro His Pro Phe Leu His Arg Tyr
  100         105         110

Tyr Gln Arg Gln Leu Ser Ser Thr Tyr Arg Asp Leu Arg Lys Gly Val
  115         120         125

Tyr Val Pro Tyr Thr Gln Gly Lys Trp Glu Gly Glu Leu Gly Thr Asp
  130         135         140

Leu Val Ser Ile Pro His Gly Pro Asn Val Thr Val Arg Ala Asn Ile
  145         150         155         160

Ala Ala Ile Thr Glu Ser Asp Lys Phe Phe Ile Asn Gly Ser Asn Trp
  165         170         175
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UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
APPLICATION NO. : 09/869414
DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 48 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Glu Gly Ile Leu Gly Leu Ala Tyr Ala Glu Ile Ala Arg Leu Cys Gly
180 185 190
Ala Gly Phe Pro Leu Asn Gln Ser Glu Val Leu Ala Ser Val Gly Gly
195 200 205
Ser Met Ile Ile Gly Gly Ile Asp His Ser Leu Tyr Thr Gly Ser Leu
210 215 220
Trp Tyr Thr Pro Ile Arg Arg Glu Trp Tyr Tyr Glu Val Ile Ile Val
225 230 235 240
Arg Val Glu Ile Asn Gly Gln Asp Leu Lys Met Asp Cys Lys Glu Tyr
245 250 255
Asn Tyr Asp Lys Ser Ile Val Asp Ser Gly Thr Thr Asn Leu Arg Leu
260 265 270
Pro Lys Lys Val Phe Glu Ala Ala Val Lys Ser Ile Lys Ala Ala Ser
275 280 285
Ser Thr Glu Lys Phe Pro Asp Gly Phe Trp Leu Gly Glu Gln Leu Val
290 295 300
Cys Trp Gln Ala Gly Thr Thr Pro Trp Asn Ile Phe Pro Val Ile Ser
305 310 315 320
Leu Tyr Leu Met Gly Glu Val Thr Asn Gln Ser Phe Arg Ile Thr Ile
325 330 335
Leu Pro Gln Gln Tyr Leu Arg Pro Val Glu Asp Val Ala Thr Ser Gln
340 345 350
Asp Asp Cys Tyr Lys Phe Ala Ile Ser Gln Ser Ser Thr Gly Thr Val
355 360 365
Met Gly Ala Val Ile Met Glu Gly Phe Tyr Val Val Phe Asp Arg Ala
370 375 380
Arg Lys Arg Ile Gly Phe Ala Val Ser Ala Cys His Val His Asp Glu
385 390 395 400
Phe Arg Thr Ala Ala Val Glu Gly Pro Phe Val Thr Leu Asp Met Glu
405 410 415
Asp Cys Gly Tyr Asn Ile Pro Gln Thr Asp Glu Ser
420 425

<210> 52

<211> 1305

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Hu-Asp2(b)
delta TM

<400> 52

atggcccaag coctgccctg gctcotgctg tggatggggc ggggagtget goctgcccaac 60
ggcaccagac acggcatccg gctgccctg cgcagcggcc tggggggcgc cccctggggg 120
ctgctggctgc cccgggagac cgacgaagag ccgaggagac ccggccggag gggcagcttt 180
gtggagatgg tggacaacct gaggggcaag tgggggcagg gctactacgt ggagatgacc 240

UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
 APPLICATION NO. : 09/869414
 DATED : September 14, 2004
 INVENTOR(S) : Mark E. Gurney et al.

Page 49 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

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gtgggcagcc ccccgagac gctcaacatc ctggtggata caggcagcag taactttgca 300
gtgggtgctg cccccacccc ctctctgcat cgctactacc agaggcagct gtccagcaca 360
taccgggacc tccggaaggg tgtgtatgtg ccctacaccc agggcaagtg ggaaggggag 420
ctgggcaccc acctggtaag catcccccac ggccccaacg tcactgtgctg tgccaacatt 480
gctgccatca ctgaatcaga caagttcttc atcaacggct ccaactggga aggcattcctg 540
gggctggcct atgctgagat tggcaggctt tgtgggtgctg gcttccccct caaccagtct 600
gaagtgtctg cctctgtcgg agggagcatg atcattggag gtatcgacca ctctgtgtac 660
acaggcagtc tctgggtatac acccatccgg cgggagtggg attatgaggt catcattgtg 720
cgggtggaga tcaatggaca ggatctgaaa atggactgca aggagtacaa ctatgacaag 780
agcattgtgg acagtggcac caccaacctt cgtttgccca agaaagtgtt tgaagctgca 840
gtcaaatcca tcaaggcagc ctccctccacg gagaagttcc ctgatgggtt ctggctagga 900
gagcagctgg tgtgctggga agcaggcacc accccttggg acattttccc agtcattctca 960
ctctacctaa tgggtgaggt taccaccagc tccctccgca tcaccatcct tccgcagcaa 1020
tacctgctgg cagtgggaaga tgtggccacg tcccaagacg actgttacaa gtttgccatc 1080
tcacagtcac ccacgggacac tggtatggga gctgttatca tggagggtct ctacgttgtc 1140
tttgatcggg ccggaagacg aattggcttt gctgtcagcg cttgccatgt gcacgatgag 1200
ttcaggacgg cagcgggtgga aggccctttt gtcaccttgg acatggaaga ctgtggctac 1260
aacattccac agacagatga gtcacagcag cagcagcagc agtga 1305
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<210> 53
 <211> 434
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Hu-Asp2(b)
 delta TM

<400> 53
 Met Ala Gln Ala Leu Pro Trp Leu Leu Leu Trp Met Gly Ala Gly Val
 1 5 10 15
 Leu Pro Ala His Gly Thr Gln His Gly Ile Arg Leu Pro Leu Arg Ser
 20 25 30
 Gly Leu Gly Gly Ala Pro Leu Gly Leu Arg Leu Pro Arg Glu Thr Asp
 35 40 45
 Glu Glu Pro Glu Glu Pro Gly Arg Arg Gly Ser Phe Val Glu Met Val
 50 55 60
 Asp Asn Leu Arg Gly Lys Ser Gly Gln Gly Tyr Tyr Val Glu Met Thr
 65 70 75 80
 Val Gly Ser Pro Pro Gln Thr Leu Asn Ile Leu Val Asp Thr Gly Ser
 85 90 95
 Ser Asn Phe Ala Val Gly Ala Ala Pro His Pro Phe Leu His Arg Tyr
 100 105 110
 Tyr Gln Arg Gln Leu Ser Ser Thr Tyr Arg Asp Leu Arg Lys Gly Val
 115 120 125
 Tyr Val Pro Tyr Thr Gln Gly Lys Trp Glu Gly Glu Leu Gly Thr Asp
 130 135 140
 Leu Val Ser Ile Pro His Gly Pro Asn Val Thr Val Arg Ala Asn Ile
 145 150 155 160
 Ala Ala Ile Thr Glu Ser Asp Lys Phe Phe Ile Asn Gly Ser Asn Trp
 165 170 175

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
APPLICATION NO. : 09/869414
DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 50 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Glu Gly Ile Leu Gly Leu Ala Tyr Ala Glu Ile Ala Arg Leu Cys Gly
180 185 190

Ala Gly Phe Pro Leu Asn Gln Ser Glu Val Leu Ala Ser Val Gly Gly
195 200 205

Ser Met Ile Ile Gly Gly Ile Asp His Ser Leu Tyr Thr Gly Ser Leu
210 215 220

Trp Tyr Thr Pro Ile Arg Arg Glu Trp Tyr Tyr Glu Val Ile Ile Val
225 230 235 240

Arg Val Glu Ile Asn Gly Gln Asp Leu Lys Met Asp Cys Lys Glu Tyr
245 250 255

Asn Tyr Asp Lys Ser Ile Val Asp Ser Gly Thr Thr Asn Leu Arg Leu
260 265 270

Pro Lys Lys Val Phe Glu Ala Ala Val Lys Ser Ile Lys Ala Ala Ser
275 280 285

Ser Thr Glu Lys Phe Pro Asp Gly Phe Trp Leu Gly Glu Gln Leu Val
290 295 300

Cys Trp Gln Ala Gly Thr Thr Pro Trp Asn Ile Phe Pro Val Ile Ser
305 310 315 320

Leu Tyr Leu Met Gly Glu Val Thr Asn Gln Ser Phe Arg Ile Thr Ile
325 330 335

Leu Pro Gln Gln Tyr Leu Arg Pro Val Glu Asp Val Ala Thr Ser Gln
340 345 350

Asp Asp Cys Tyr Lys Phe Ala Ile Ser Gln Ser Ser Thr Gly Thr Val
355 360 365

Met Gly Ala Val Ile Met Glu Gly Phe Tyr Val Val Phe Asp Arg Ala
370 375 380

Arg Lys Arg Ile Gly Phe Ala Val Ser Ala Cys His Val His Asp Glu
385 390 395 400

Phe Arg Thr Ala Ala Val Glu Gly Pro Phe Val Thr Leu Asp Met Glu
405 410 415

Asp Cys Gly Tyr Asn Ile Pro Gln Thr Asp Glu Ser His His His His
420 425 430

His His

<210> 54
<211> 2310
<212> DNA
<213> Homo sapiens

<400> 54
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ccactgatg gtaatgctgg cctgctggct gaacccacaga ttgccatgtt ctgtggcaga 120
ctgaacatgc acatgaatgt ccagaatggg aagtgggatt cagatccatc agggacccaa 180

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
APPLICATION NO. : 09/869414
DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 51 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

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acotgcattg ataccaagga aggcattctg cagtattgcc aagaagtcta cctgaactg 240
cagatcacca atgtggtaga agccaacca cagtgacca tccagaactg gtgcaagcgg 300
ggccgcaago agtgcaagac ccattccccc tttgtgattc cctaccgctg cttagtgggt 360
gagtttgtaa gtgatgccct tctogttcct gacaagtgca aattcttaca ccaggagagg 420
atggatgttt gcgaaactca tcttcactgg cacaccgtcg ccaagagagac atgcagtggag 480
aagagtaaca acttgcatga ctacggcatg ttgctgcctt gcggaattga caagttooga 540
ggggtagagt ttgtgtgttg cccactggct gaagaaagtg acaatgtgga ttctgctgat 600
gcggaggagg atgactcgga tgtctgggtg ggccggagcag acacagacta tgcagatggg 660
agtgaagaca aagtagtaga agtagcagag gaggaagaag tggctgaggt ggaagaagaa 720
gaagccgatg atgacgagga cgtatgaggat ggtgatgagg tagaggaaga ggtgaggaa 780
coctaogaaag aagccacaga gagaaccacc agcattgccca ccaccaccac caccaccaca 840
gagtctgtgg aagaggtggt tccagaggtg tgctctgaac aagccgagac ggggcccgtg 900
cgagcaatga tctcccggtg gtaacttgat gtgactgaag ggaagtgtgc cccattcttt 960
tacggcggat gtggcggcaa ccggaacaac tttgacacag aagagtactg catggccgtg 1020
tgtggcaggg ccattgtccca aagtttactc aagactaccc aggaacctct tggcogagat 1080
cctgttaaac ttcttacaac agcagccagt acccctgatg ccgttgacaa gtatctcgag 1140
acacctgggg atgagaatga acatgcccat ttccagaaag ccaagagagag gcttgaggcc 1200
aagcaccgag agagaatgtc ccagggtcatg agagaatggg aagaggcaga acgtcaagca 1260
aagaacttgc cttaaagctga taagaaggca gttatccagc atttccagga gaaagtggaa 1320
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gtggaagcca tgcctaatga ccgcgcgcgc ctggccctgg agaactacat caccgctctg 1440
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gaacagaagg acagacagca caccctaaag catttcgagc atgtgcgcat ggtggatccc 1560
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aaaaccaccg tggagctcct tcccgatgaat ggagagttca gcctggagca tctccagccg 1860
tggcattott ttgggggtga ctctgtgcca gccaacacag aaaacgaagt tgagcctgtt 1920
gatgcccggc ctgctgcgga ccgaggactg accactgcac caggttcttg gttgacaaat 1980
atcaagacgg agggatctc tgaagtgaag atggatgcag aattccgaca tgactcagga 2040
tatgaagttc atcatcaaaa attggtgttc tttgcagaag atgtgggttc aaacaaagg 2100
gcaatcattg gactcatggt gggcggtgtt gtcatagcga cagtgatcgt catcaccttg 2160
gtgatgctga agaagaaca gtacacatcc attcatcatg gtgtgggtga ggttgacgcc 2220
gotgtcacc cagaggagcg ccacctgtcc aagatgcagc agaacggcta cgaaaatcca 2280
acctacaagt tctttgagca gatgcagaac 2310
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<210> 55
<211> 770
<212> PRT
<213> Homo sapiens

<400> 55
Met Leu Pro Gly Leu Ala Leu Leu Leu Ala Ala Trp Thr Ala Arg
1 5 10 15
Ala Leu Glu Val Pro Thr Asp Gly Asn Ala Gly Leu Leu Ala Glu Pro
20 25 30
Gln Ile Ala Met Phe Cys Gly Arg Leu Asn Met His Met Asn Val Gln
35 40 45
Asn Gly Lys Trp Asp Ser Asp Pro Ser Gly Thr Lys Thr Cys Ile Asp
50 55 60
Thr Lys Glu Gly Ile Leu Gln Tyr Cys Gln Glu Val Tyr Pro Glu Leu
65 70 75 80
Gln Ile Thr Asn Val Val Glu Ala Asn Gln Pro Val Thr Ile Gln Asn
85 90 95
Trp Cys Lys Arg Gly Arg Lys Gln Cys Lys Thr His Pro His Phe Val
100 105 110

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
APPLICATION NO. : 09/869414
DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 52 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Ile Pro Tyr Arg Cys Leu Val Gly Glu Phe Val Ser Asp Ala Leu Leu
115 120 125

Val Pro Asp Lys Cys Lys Phe Leu His Gln Glu Arg Met Asp Val Cys
130 135 140

Glu Thr His Leu His Trp His Thr Val Ala Lys Glu Thr Cys Ser Glu
145 150 155 160

Lys Ser Thr Asn Leu His Asp Tyr Gly Met Leu Leu Pro Cys Gly Ile
165 170 175

Asp Lys Phe Arg Gly Val Glu Phe Val Cys Cys Pro Leu Ala Glu Glu
180 185 190

Ser Asp Asn Val Asp Ser Ala Asp Ala Glu Glu Asp Asp Ser Asp Val
195 200 205

Trp Trp Gly Gly Ala Asp Thr Asp Tyr Ala Asp Gly Ser Glu Asp Lys
210 215 220

Val Val Glu Val Ala Glu Glu Glu Val Ala Glu Val Glu Glu Glu
225 230 235 240

Glu Ala Asp Asp Asp Glu Asp Asp Glu Asp Gly Asp Glu Val Glu Glu
245 250 255

Glu Ala Glu Glu Pro Tyr Glu Glu Ala Thr Glu Arg Thr Thr Ser Ile
260 265 270

Ala Thr Thr Thr Thr Thr Thr Thr Glu Ser Val Glu Glu Val Val Arg
275 280 285

Glu Val Cys Ser Glu Gln Ala Glu Thr Gly Pro Cys Arg Ala Met Ile
290 295 300

Ser Arg Trp Tyr Phe Asp Val Thr Glu Gly Lys Cys Ala Pro Phe Phe
305 310 315 320

Tyr Gly Gly Cys Gly Gly Asn Arg Asn Asn Phe Asp Thr Glu Glu Tyr
325 330 335

Cys Met Ala Val Cys Gly Ser Ala Met Ser Gln Ser Leu Leu Lys Thr
340 345 350

Thr Gln Glu Pro Leu Ala Arg Asp Pro Val Lys Leu Pro Thr Thr Ala
355 360 365

Ala Ser Thr Pro Asp Ala Val Asp Lys Tyr Leu Glu Thr Pro Gly Asp
370 375 380

Glu Asn Glu His Ala His Phe Gln Lys Ala Lys Glu Arg Leu Glu Ala
385 390 395 400

Lys His Arg Glu Arg Met Ser Gln Val Met Arg Glu Trp Glu Glu Ala
405 410 415

Glu Arg Gln Ala Lys Asn Leu Pro Lys Ala Asp Lys Lys Ala Val Ile
420 425 430

Gln His Phe Gln Glu Lys Val Glu Ser Leu Glu Gln Glu Ala Ala Asn
435 440 445

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
APPLICATION NO. : 09/869414
DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 53 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Glu Arg Gln Gln Leu Val Glu Thr His Met Ala Arg Val Glu Ala Met
450 455 460

Leu Asn Asp Arg Arg Arg Leu Ala Leu Glu Asn Tyr Ile Thr Ala Leu
465 470 475 480

Gln Ala Val Pro Pro Arg Pro Arg His Val Phe Asn Met Leu Lys Lys
485 490 495

Tyr Val Arg Ala Glu Gln Lys Asp Arg Gln His Thr Leu Lys His Phe
500 505 510

Glu His Val Arg Met Val Asp Pro Lys Lys Ala Ala Gln Ile Arg Ser
515 520 525

Gln Val Met Thr His Leu Arg Val Ile Tyr Glu Arg Met Asn Gln Ser
530 535 540

Leu Ser Leu Leu Tyr Asn Val Pro Ala Val Ala Glu Glu Ile Gln Asp
545 550 555 560

Glu Val Asp Glu Leu Leu Gln Lys Glu Gln Asn Tyr Ser Asp Asp Val
565 570 575

Leu Ala Asn Met Ile Ser Glu Pro Arg Ile Ser Tyr Gly Asn Asp Ala
580 585 590

Leu Met Pro Ser Leu Thr Glu Thr Lys Thr Thr Val Glu Leu Leu Pro
595 600 605

Val Asn Gly Glu Phe Ser Leu Asp Asp Leu Gln Pro Trp His Ser Phe
610 615 620

Gly Ala Asp Ser Val Pro Ala Asn Thr Glu Asn Glu Val Glu Pro Val
625 630 635 640

Asp Ala Arg Pro Ala Ala Asp Arg Gly Leu Thr Thr Arg Pro Gly Ser
645 650 655

Gly Leu Thr Asn Ile Lys Thr Glu Glu Ile Ser Glu Val Lys Met Asp
660 665 670

Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val His His Gln Lys Leu
675 680 685

Val Phe Phe Ala Glu Asp Val Gly Ser Asn Lys Gly Ala Ile Ile Gly
690 695 700

Leu Met Val Gly Gly Val Val Ile Ala Thr Val Ile Val Ile Thr Leu
705 710 715 720

Val Met Leu Lys Lys Lys Gln Tyr Thr Ser Ile His His Gly Val Val
725 730 735

Glu Val Asp Ala Ala Val Thr Pro Glu Glu Arg His Leu Ser Lys Met
740 745 750

Gln Gln Asn Gly Tyr Glu Asn Pro Thr Tyr Lys Phe Phe Glu Gln Met
755 760 765

Gln Asn
770

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
APPLICATION NO. : 09/869414
DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 54 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

<210> 56
<211> 2253
<212> DNA
<213> Homo sapiens

<400> 56
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ctgaacatgc acatgaatgt ccagaatggg aagtgggatt cagatccatc agggaccaaa 180
acctgcattg ataccaagga aggcattctg cagtattgcc aagaagtcta cctgaaactg 240
cagatcacca atgtggtaga agccaaccaa ccagtgacca tccagaactg gtgcaagcgg 300
ggcgcgaagc agtgcaagac ccatcccccac tttgtgattc cctaccgctg cttagtgggt 360
gagtttgttaa gtgatgccct tctcgttcct gacaagtgca aattcttaca ccaggagagg 420
atggatgttt gcgaaactca tcttcactgg cacaccgtcg ccaaagagac atgcagtggg 480
aagagtacca acttgcctga ctacggcatg ttgctgccct gcggaattga caagtccga 540
ggggttagagt ttgtgtgttg cccactggct gaagaaagtg acaatgtgga ttctgctgat 600
gctggaggagg atgactcggg tgtctgggtg ggcggagcag acacagacta tgcagatggg 660
agtgaagaca aagtagtaga agtagcagag gaggaagaag tggctgagggt ggaagaagaa 720
gaagccgatg atgacaggga cgtgaggatg ggtgatgagg tagaggaaga ggtgaggaa 780
ccctacgaag aagccacaga gagaaccacc agcattgccca ccaccaccac caccaccaca 840
gagtcctgtg aagaggtggt tcgagaggtg tgctctgaac aagccgagac ggggcccgtg 900
cgagcaatga tctcccgtg gtactttgat gtgactgaag ggaagtgtgc cccattcttt 960
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gcaaagaact tgcctaagc tgataagaag gcagtatatc agcatttcca ggagaaagtg 1260
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ggtgcaatca ttggactcat ggtggcggt gttgtcatag cgacagtgat cgtcatcacc 2100
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<210> 57
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<212> PRT
<213> Homo sapiens

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20 25 30
Gln Ile Ala Met Phe Cys Gly Arg Leu Asn Met His Met Asn Val Gln
35 40 45

UNITED STATES PATENT AND TRADEMARK OFFICE
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PATENT NO. : 6,790,610 B2
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DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 55 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Asn Gly Lys Trp Asp Ser Asp Pro Ser Gly Thr Lys Thr Cys Ile Asp
50 55 60
Thr Lys Glu Gly Ile Leu Gln Tyr Cys Gln Glu Val Tyr Pro Glu Leu
65 70 75 80
Gln Ile Thr Asn Val Val Glu Ala Asn Gln Pro Val Thr Ile Gln Asn
85 90 95
Trp Cys Lys Arg Gly Arg Lys Gln Cys Lys Thr His Pro His Phe Val
100 105 110
Ile Pro Tyr Arg Cys Leu Val Gly Glu Phe Val Ser Asp Ala Leu Leu
115 120 125
Val Pro Asp Lys Cys Lys Phe Leu His Gln Glu Arg Met Asp Val Cys
130 135 140
Glu Thr His Leu His Trp His Thr Val Ala Lys Glu Thr Cys Ser Glu
145 150 155 160
Lys Ser Thr Asn Leu His Asp Tyr Gly Met Leu Leu Pro Cys Gly Ile
165 170 175
Asp Lys Phe Arg Gly Val Glu Phe Val Cys Cys Pro Leu Ala Glu Glu
180 185 190
Ser Asp Asn Val Asp Ser Ala Asp Ala Glu Glu Asp Asp Ser Asp Val
195 200 205
Trp Trp Gly Gly Ala Asp Thr Asp Tyr Ala Asp Gly Ser Glu Asp Lys
210 215 220
Val Val Glu Val Ala Glu Glu Glu Glu Val Ala Glu Val Glu Glu Glu
225 230 235 240
Glu Ala Asp Asp Asp Glu Asp Asp Glu Asp Gly Asp Glu Val Glu Glu
245 250 255
Glu Ala Glu Glu Pro Tyr Glu Glu Ala Thr Glu Arg Thr Thr Ser Ile
260 265 270
Ala Thr Thr Thr Thr Thr Thr Thr Glu Ser Val Glu Glu Val Val Arg
275 280 285
Glu Val Cys Ser Glu Gln Ala Glu Thr Gly Pro Cys Arg Ala Met Ile
290 295 300
Ser Arg Trp Tyr Phe Asp Val Thr Glu Gly Lys Cys Ala Pro Phe Phe
305 310 315 320
Tyr Gly Gly Cys Gly Gly Asn Arg Asn Asn Phe Asp Thr Glu Glu Tyr
325 330 335
Cys Met Ala Val Cys Gly Ser Ala Ile Pro Thr Thr Ala Ala Ser Thr
340 345 350
Pro Asp Ala Val Asp Lys Tyr Leu Glu Thr Pro Gly Asp Glu Asn Glu
355 360 365
His Ala His Phe Gln Lys Ala Lys Glu Arg Leu Glu Ala Lys His Arg
370 375 380

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DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 56 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Glu Arg Met Ser Gln Val Met Arg Glu Trp Glu Glu Ala Glu Arg Gln
385 390 395 400
Ala Lys Asn Leu Pro Lys Ala Asp Lys Lys Ala Val Ile Gln His Phe
405 410 415
Gln Glu Lys Val Glu Ser Leu Glu Gln Glu Ala Ala Asn Glu Arg Gln
420 425 430
Gln Leu Val Glu Thr His Met Ala Arg Val Glu Ala Met Leu Asn Asp
435 440 445
Arg Arg Arg Leu Ala Leu Glu Asn Tyr Ile Thr Ala Leu Gln Ala Val
450 455 460
Pro Pro Arg Pro Arg His Val Phe Asn Met Leu Lys Lys Tyr Val Arg
465 470 475 480
Ala Glu Gln Lys Asp Arg Gln His Thr Leu Lys His Phe Glu His Val
485 490 495
Arg Met Val Asp Pro Lys Lys Ala Ala Gln Ile Arg Ser Gln Val Met
500 505 510
Thr His Leu Arg Val Ile Tyr Glu Arg Met Asn Gln Ser Leu Ser Leu
515 520 525
Leu Tyr Asn Val Pro Ala Val Ala Glu Glu Ile Gln Asp Glu Val Asp
530 535 540
Glu Leu Leu Gln Lys Glu Gln Asn Tyr Ser Asp Asp Val Leu Ala Asn
545 550 555 560
Met Ile Ser Glu Pro Arg Ile Ser Tyr Gly Asn Asp Ala Leu Met Pro
565 570 575
Ser Leu Thr Glu Thr Lys Thr Thr Val Glu Leu Leu Pro Val Asn Gly
580 585 590
Glu Phe Ser Leu Asp Asp Leu Gln Pro Trp His Ser Phe Gly Ala Asp
595 600 605
Ser Val Pro Ala Asn Thr Glu Asn Glu Val Glu Pro Val Asp Ala Arg
610 615 620
Pro Ala Ala Asp Arg Gly Leu Thr Thr Arg Pro Gly Ser Gly Leu Thr
625 630 635 640
Asn Ile Lys Thr Glu Glu Ile Ser Glu Val Lys Met Asp Ala Glu Phe
645 650 655
Arg His Asp Ser Gly Tyr Glu Val His His Gln Lys Leu Val Phe Phe
660 665 670
Ala Glu Asp Val Gly Ser Asn Lys Gly Ala Ile Ile Gly Leu Met Val
675 680 685
Gly Gly Val Val Ile Ala Thr Val Ile Val Ile Thr Leu Val Met Leu
690 695 700
Lys Lys Lys Gln Tyr Thr Ser Ile His His Gly Val Val Glu Val Asp
705 710 715 720

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Page 57 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Ala. Ala Val Thr Pro Glu Glu Arg His Leu Ser Lys Met Gln Gln Asn
725 730 735

Gly Tyr Glu Asn Pro Thr Tyr Lys Phe Phe Glu Gln Met Gln Asn
740 745 750

<210> 58
<211> 2316
<212> DNA
<213> Homo sapiens

<400> 58
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ctgaacatgc acatgaatgt ccagaatggg aagtgggatt cagatccatc agggacccaa 180
acctgcattg ataccaagga aggcattctg cagtattgcc aagaagtcta cctgaactg 240
cagatcacca atgtggtaga agccaaccaa ccagtgaaca tccagaactg gtgcaagcgg 300
ggcgcgaagc agtgaagac ccaccccaac tttgtgattc cctaccgctg cttagtgtgt 360
gagttttaa gtgatgccct tctcgttctt gacaagtga aattcttaca ccaggagagg 420
atggatgttt gcgaaactca tcttcactgg cacaccgtcg ccaaagagac atgcagtgg 480
aagagtacca acttgcattg ctacggcatg ttgctgccct gcggaattga caagtccga 540
ggggtagagt ttgtgtgtg cccactggct gaagaagtg acaatgtgga ttctgctgat 600
gcggaggagg atgactcga tgtctgtgtg ggcggagcag acacagacta tgcagatggg 660
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gaagccgatg atgacgagga cgtatgaggat ggtgatgagg tagaggaaaga ggctgaggaa 780
cctacgaag aagccacaga gagaaccacc agcattgcca ccaccaccac caccaccaca 840
gagtcctgtg aagaggtgtg tcgagaggtg tgctctgaac aagccgagac ggggcccgtg 900
cgagcaatga tctcccgtg gtactttgat gtgactgaag ggaagtgtgc cccattctt 960
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gaacagaagg acagacagca caccctaag catttcgagc atgtgcgcat ggttgatccc 1560
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tggcattott ttggggctga ctctgtgca gccaacacag aaaacgaagt tgagcctgtt 1920
gatgcccgcc ctgtgcga cogaggactg accactcgac caggttctgg gttgacaaat 1980
atcaagacgg aggagatctc tgaagtgaag atggatgcag aattccgaca tgactcagga 2040
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gcaatcattg gactcatggt gggcggtgtt gtcatacgca cagtgtatgt catoccttg 2160
gtgatgtga agaagaaaca gtacacatoc attcatcatg gtgtggtgga gggtgacgcc 2220
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<210> 59
<211> 772
<212> PRT
<213> Homo sapiens

<400> 59
Met Leu Pro Gly Leu Ala Leu Leu Leu Leu Ala Ala Trp Thr Ala Arg
1 5 10 15

Ala Leu Glu Val Pro Thr Asp Gly Asn Ala Gly Leu Leu Ala Glu Pro

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
 APPLICATION NO. : 09/869414
 DATED : September 14, 2004
 INVENTOR(S) : Mark E. Gurney et al.

Page 58 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

20	25	30
Gln Ile Ala Met Phe Cys Gly Arg Leu Asn Met His Met Asn Val Gln 35 40 45		
Asn Gly Lys Trp Asp Ser Asp Pro Ser Gly Thr Lys Thr Cys Ile Asp 50 55 60		
Thr Lys Glu Gly Ile Leu Gln Tyr Cys Gln Glu Val Tyr Pro Glu Leu 65 70 75 80		
Gln Ile Thr Asn Val Val Glu Ala Asn Gln Pro Val Thr Ile Gln Asn 85 90 95		
Trp Cys Lys Arg Gly Arg Lys Gln Cys Lys Thr His Pro His Phe Val 100 105 110		
Ile Pro Tyr Arg Cys Leu Val Gly Glu Phe Val Ser Asp Ala Leu Leu 115 120 125		
Val Pro Asp Lys Cys Lys Phe Leu His Gln Glu Arg Met Asp Val Cys 130 135 140		
Glu Thr His Leu His Trp His Thr Val Ala Lys Glu Thr Cys Ser Glu 145 150 155 160		
Lys Ser Thr Asn Leu His Asp Tyr Gly Met Leu Leu Pro Cys Gly Ile 165 170 175		
Asp Lys Phe Arg Gly Val Glu Phe Val Cys Cys Pro Leu Ala Glu Glu 180 185 190		
Ser Asp Asn Val Asp Ser Ala Asp Ala Glu Glu Asp Asp Ser Asp Val 195 200 205		
Trp Trp Gly Gly Ala Asp Thr Asp Tyr Ala Asp Gly Ser Glu Asp Lys 210 215 220		
Val Val Glu Val Ala Glu Glu Glu Glu Val Ala Glu Val Glu Glu Glu 225 230 235 240		
Glu Ala Asp Asp Asp Glu Asp Asp Glu Asp Gly Asp Glu Val Glu Glu 245 250 255		
Glu Ala Glu Glu Pro Tyr Glu Glu Ala Thr Glu Arg Thr Thr Ser Ile 260 265 270		
Ala Thr Thr Thr Thr Thr Thr Thr Glu Ser Val Glu Glu Val Val Arg 275 280 285		
Glu Val Cys Ser Glu Gln Ala Glu Thr Gly Pro Cys Arg Ala Met Ile 290 295 300		
Ser Arg Trp Tyr Phe Asp Val Thr Glu Gly Lys Cys Ala Pro Phe Phe 305 310 315 320		
Tyr Gly Gly Cys Gly Gly Asn Arg Asn Asn Phe Asp Thr Glu Glu Tyr 325 330 335		
Cys Met Ala Val Cys Gly Ser Ala Met Ser Gln Ser Leu Leu Lys Thr 340 345 350		

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DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 59 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Thr Gln Glu Pro Leu Ala Arg Asp Pro Val Lys Leu Pro Thr Thr Ala
355 360 365
Ala Ser Thr Pro Asp Ala Val Asp Lys Tyr Leu Glu Thr Pro Gly Asp
370 375 380
Glu Asn Glu His Ala His Phe Gln Lys Ala Lys Glu Arg Leu Glu Ala
385 390 395 400
Lys His Arg Glu Arg Met Ser Gln Val Met Arg Glu Trp Glu Glu Ala
405 410 415
Glu Arg Gln Ala Lys Asn Leu Pro Lys Ala Asp Lys Lys Ala Val Ile
420 425 430
Gln His Phe Gln Glu Lys Val Glu Ser Leu Glu Gln Glu Ala Ala Asn
435 440 445
Glu Arg Gln Gln Leu Val Glu Thr His Met Ala Arg Val Glu Ala Met
450 455 460
Leu Asn Asp Arg Arg Arg Leu Ala Leu Glu Asn Tyr Ile Thr Ala Leu
465 470 475 480
Gln Ala Val Pro Pro Arg Pro Arg His Val Phe Asn Met Leu Lys Lys
485 490 495
Tyr Val Arg Ala Glu Gln Lys Asp Arg Gln His Thr Leu Lys His Phe
500 505 510
Glu His Val Arg Met Val Asp Pro Lys Lys Ala Ala Gln Ile Arg Ser
515 520 525
Gln Val Met Thr His Leu Arg Val Ile Tyr Glu Arg Met Asn Gln Ser
530 535 540
Leu Ser Leu Leu Tyr Asn Val Pro Ala Val Ala Glu Glu Ile Gln Asp
545 550 555 560
Glu Val Asp Glu Leu Leu Gln Lys Glu Gln Asn Tyr Ser Asp Asp Val
565 570 575
Leu Ala Asn Met Ile Ser Glu Pro Arg Ile Ser Tyr Gly Asn Asp Ala
580 585 590
Leu Met Pro Ser Leu Thr Glu Thr Lys Thr Thr Val Glu Leu Leu Pro
595 600 605
Val Asn Gly Glu Phe Ser Leu Asp Asp Leu Gln Pro Trp His Ser Phe
610 615 620
Gly Ala Asp Ser Val Pro Ala Asn Thr Glu Asn Glu Val Glu Pro Val
625 630 635 640
Asp Ala Arg Pro Ala Ala Asp Arg Gly Leu Thr Thr Arg Pro Gly Ser
645 650 655
Gly Leu Thr Asn Ile Lys Thr Glu Glu Ile Ser Glu Val Lys Met Asp
660 665 670
Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val His His Gln Lys Leu
675 680 685

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DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 60 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Val Phe Phe Ala Glu Asp Val Gly Ser Asn Lys Gly Ala Ile Ile Gly
690 695 700

Leu Met Val Gly Gly Val Val Ile Ala Thr Val Ile Val Ile Thr Leu
705 710 715 720

Val Met Leu Lys Lys Lys Gln Tyr Thr Ser Ile His His Gly Val Val
725 730 735

Glu Val Asp Ala Ala Val Thr Pro Glu Glu Arg His Leu Ser Lys Met
740 745 750

Gln Gln Asn Gly Tyr Glu Asn Pro Thr Tyr Lys Phe Phe Glu Gln Met
755 760 765

Gln Asn Lys Lys
770

<210> 60
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<212> DNA
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acctgcattg ataccaagga aggcacccctg cagtattgco aagaagtcta ccctgaactg 240
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aagagtacca acttgcattg ctaccggcatg ttgctgcccct goggaattga caagtccga 540
ggggttagag ttgtgtgttg cccactggct gaagaaagtg acaatgtgga ttctgctgat 600
gocggaggagg atgactcgga tgtctgtgtg ggccggagcag acacagacta tgcagatggg 660
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gaagccgatg atgacgagga cgtgagggat ggtgatgagg tagaggaaga ggcctgaggaa 780
ccctacgaag aagccacaga gagaaccacc agcattgcca ccaccaccac 840
gagtcctgtg aagaggtggt tccagagggtg tgctctgaac aagccgagac ggggocgtgc 900
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ccgtggcatt cttttggggg tgactctgtg ccagccaaca cagaaaaaga agttgagoc 1860
gttgatgccc gccctgctgc cgaccgagga ctgaccactc gaccaggttc tgggttgaca 1920
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ttggtgatgc tgaagaagaa acagtacaca tccattcatc atggtgtggt ggaggttgac 2160

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DATED : September 14, 2004
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Page 61 of 66

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gcgcgtgtca cccagagga ggcgcacctg tccaagatgc agcagaacgg ctacgaaaat 2220
ccaacctaca agttctttga gcagatgcag aacaagaag 2259

<210> 61
<211> 753
<212> PRT
<213> Homo sapiens

<400> 61
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20 25 30
Gln Ile Ala Met Phe Cys Gly Arg Leu Asn Met His Met Asn Val Gln
35 40 45
Asn Gly Lys Trp Asp Ser Asp Pro Ser Gly Thr Lys Thr Cys Ile Asp
50 55 60
Thr Lys Glu Gly Ile Leu Gln Tyr Cys Gln Glu Val Tyr Pro Glu Leu
65 70 75 80
Gln Ile Thr Asn Val Val Glu Ala Asn Gln Pro Val Thr Ile Gln Asn
85 90 95
Trp Cys Lys Arg Gly Arg Lys Gln Cys Lys Thr His Pro His Phe Val
100 105 110
Ile Pro Tyr Arg Cys Leu Val Gly Glu Phe Val Ser Asp Ala Leu Leu
115 120 125
Val Pro Asp Lys Cys Lys Phe Leu His Gln Glu Arg Met Asp Val Cys
130 135 140
Glu Thr His Leu His Trp His Thr Val Ala Lys Glu Thr Cys Ser Glu
145 150 155 160
Lys Ser Thr Asn Leu His Asp Tyr Gly Met Leu Leu Pro Cys Gly Ile
165 170 175
Asp Lys Phe Arg Gly Val Glu Phe Val Cys Cys Pro Leu Ala Glu Glu
180 185 190
Ser Asp Asn Val Asp Ser Ala Asp Ala Glu Glu Asp Asp Ser Asp Val
195 200 205
Trp Trp Gly Gly Ala Asp Thr Asp Tyr Ala Asp Gly Ser Glu Asp Lys
210 215 220
Val Val Glu Val Ala Glu Glu Glu Glu Val Ala Glu Val Glu Glu Glu
225 230 235 240
Glu Ala Asp Asp Asp Glu Asp Asp Glu Asp Gly Asp Glu Val Glu Glu
245 250 255
Glu Ala Glu Glu Pro Tyr Glu Glu Ala Thr Glu Arg Thr Thr Ser Ile
260 265 270
Ala Thr Thr Thr Thr Thr Thr Thr Glu Ser Val Glu Glu Val Val Arg
275 280 285

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
APPLICATION NO. : 09/869414
DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 62 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Glu Val Cys Ser Glu Gln Ala Glu Thr Gly Pro Cys Arg Ala Met Ile
290 295 300
Ser Arg Trp Tyr Phe Asp Val Thr Glu Gly Lys Cys Ala Pro Phe Phe
305 310 315 320
Tyr Gly Gly Cys Gly Gly Asn Arg Asn Asn Phe Asp Thr Glu Glu Tyr
325 330 335
Cys Met Ala Val Cys Gly Ser Ala Ile Pro Thr Thr Ala Ala Ser Thr
340 345 350
Pro Asp Ala Val Asp Lys Tyr Leu Glu Thr Pro Gly Asp Glu Asn Glu
355 360 365
His Ala His Phe Gln Lys Ala Lys Glu Arg Leu Glu Ala Lys His Arg
370 375 380
Glu Arg Met Ser Gln Val Met Arg Glu Trp Glu Glu Ala Glu Arg Gln
385 390 395 400
Ala Lys Asn Leu Pro Lys Ala Asp Lys Lys Ala Val Ile Gln His Phe
405 410 415
Gln Glu Lys Val Glu Ser Leu Glu Gln Glu Ala Ala Asn Glu Arg Gln
420 425 430
Gln Leu Val Glu Thr His Met Ala Arg Val Glu Ala Met Leu Asn Asp
435 440 445
Arg Arg Arg Leu Ala Leu Glu Asn Tyr Ile Thr Ala Leu Gln Ala Val
450 455 460
Pro Pro Arg Pro Arg His Val Phe Asn Met Leu Lys Lys Tyr Val Arg
465 470 475 480
Ala Glu Gln Lys Asp Arg Gln His Thr Leu Lys His Phe Glu His Val
485 490 495
Arg Met Val Asp Pro Lys Lys Ala Ala Gln Ile Arg Ser Gln Val Met
500 505 510
Thr His Leu Arg Val Ile Tyr Glu Arg Met Asn Gln Ser Leu Ser Leu
515 520 525
Leu Tyr Asn Val Pro Ala Val Ala Glu Glu Ile Gln Asp Glu Val Asp
530 535 540
Glu Leu Leu Gln Lys Glu Gln Asn Tyr Ser Asp Asp Val Leu Ala Asn
545 550 555 560
Met Ile Ser Glu Pro Arg Ile Ser Tyr Gly Asn Asp Ala Leu Met Pro
565 570 575
Ser Leu Thr Glu Thr Lys Thr Thr Val Glu Leu Leu Pro Val Asn Gly
580 585 590
Glu Phe Ser Leu Asp Asp Leu Gln Pro Trp His Ser Phe Gly Ala Asp
595 600 605
Ser Val Pro Ala Asn Thr Glu Asn Glu Val Glu Pro Val Asp Ala Arg
610 615 620

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Pro Ala Ala Asp Arg Gly Leu Thr Thr Arg Pro Gly Ser Gly Leu Thr
625 630 635 640
Asn Ile Lys Thr Glu Glu Ile Ser Glu Val Lys Met Asp Ala Glu Phe
645 650 655
Arg His Asp Ser Gly Tyr Glu Val His His Gln Lys Leu Val Phe Phe
660 665 670
Ala Glu Asp Val Gly Ser Asn Lys Gly Ala Ile Ile Gly Leu Met Val
675 680 685
Gly Gly Val Val Ile Ala Thr Val Ile Val Ile Thr Leu Val Met Leu
690 695 700
Lys Lys Lys Gln Tyr Thr Ser Ile His His Gly Val Val Glu Val Asp
705 710 715 720
Ala Ala Val Thr Pro Glu Glu Arg His Leu Ser Lys Met Gln Gln Asn
725 730 735
Gly Tyr Glu Asn Pro Thr Tyr Lys Phe Phe Glu Gln Met Gln Asn Lys
740 745 750

Lys

<210> 62
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Peptide

<400> 62
Leu Glu Val Leu Phe Gln Gly Pro
1 5

<210> 63
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Peptide

<400> 63
Ser Glu Val Asn Leu Asp Ala Glu Phe Arg
1 5 10

<210> 64
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Peptide

UNITED STATES PATENT AND TRADEMARK OFFICE
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INVENTOR(S) : Mark E. Gurney et al.

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It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

<400> 64

Ser Glu Val Lys Met Asp Ala Glu Phe Arg
1 5 10

<210> 65

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Peptide

<400> 65

Arg Arg Gly Gly Val Val Ile Ala Thr Val Ile Val Gly Glu Arg
1 5 10 15

<210> 66

<211> 4

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Peptide

<400> 66

Asn Leu Asp Ala
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<210> 67

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Peptide

<400> 67

Glu Val Lys Met Asp Ala Glu Phe
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<210> 68

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Peptide

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Gly Arg Arg Gly Ser
1 5

<210> 69

<211> 6

<212> PRT

<213> Artificial Sequence

UNITED STATES PATENT AND TRADEMARK OFFICE
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It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

<220>
<223> Description of Artificial Sequence: Synthetic Peptide

<400> 69
Thr Gln His Gly Ile Arg
1 5

<210> 70
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Peptide

<400> 70
Glu Thr Asp Glu Glu Pro
1 5

<210> 71
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Peptide

<400> 71
Met Cys Ala Glu Val Lys Met Asp Ala Glu Phe Lys Asp Asn Pro
1 5 10 15

<210> 72
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Peptide

<400> 72
Asp Ala Glu Phe Arg
1 5

<210> 73
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Peptide

<400> 73
Ser Glu Val Asn Leu
1 5

<210> 74
<211> 4

UNITED STATES PATENT AND TRADEMARK OFFICE
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It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic Peptide

<220>
<221> misc_feature
<222> (1)
<223> Xaa = Lys or Asn

<220>
<221> misc_feature
<222> (2)
<223> Xaa = Met or Leu

<220>
<221> misc_feature
<222> (3)
<223> Xaa = Asp

<220>
<221> misc_feature
<222> (4)
<223> Xaa = Asp

<400> 74
Xaa Xaa Xaa Xaa
1

Signed and Sealed this

Eighteenth Day of September, 2007



JON W. DUDAS
Director of the United States Patent and Trademark Office